

**Arts therapies for dementia: a
systematic review and community-
based case study on the value of
music therapy and dance
movement therapy**

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Abstract: The increasing number of people being diagnosed with dementia presents a need to find more evidence-based therapies that help maintain health and wellbeing post diagnosis. Music therapy (MT) and dance movement therapy (DMT) are two forms of arts therapies that share a non-verbal, holistic approach and offer a non-pharmaceutical treatment option. However, evidence for their effectiveness remains inconclusive with uncertainty regarding therapeutic components.

The first stage of this PhD involved collating quantitative and qualitative evidence for MT and DMT in a systematic review of primary sourced literature. Findings of this review indicate that both MT and DMT work to meet psychosocial needs and celebrate personhood. There was no consensus on health outcomes though there was some high quality quantitative evidence for reducing symptoms of depression and agitation. Qualitative findings focused on the importance of embodied communication and identified therapeutic components across studies including regulating arousal, increasing bodily awareness and improvisation. The evidence available focused on participants in nursing homes, revealing a lack of community-based studies, and an absence of arts-based methodologies.

Building on these findings, an evidence-based treatment manual was developed for a collaborative MT and DMT group to take place in the community. This phase adopted a case study design. Qualitative findings focused on significant moments of connection between thoughts, feelings and

physical sensations and generated three main themes in the therapeutic process: making connections, acknowledging grief and loss, and growth and empowerment, while quantitative findings suggested a reduction in depressive symptoms.

The study contributed original knowledge to arts therapies research in gathering relevant evidence associated with the process and outcomes of two of the arts therapies, namely MT and DMT. It also enabled the development of a research-based treatment manual and proposed an interdisciplinary collaborative model of practice, an exploration of new arts-based data collection tools, and testing the intervention in a community setting.

Key words: dementia; community; music therapy; dance movement therapy; case study

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Table of Contents

1	Introduction	14
1.1	Introduction	14
1.2	Common types of dementia	16
1.3	Person-centred care	19
1.4	Arts therapies and dementia	20
1.5	Evidence-based practice and existing Cochrane reviews	23
1.6	Gaps in the evidence-base and other research methodologies	27
1.7	Motivation for the research – why MT and DMT?	29
1.8	Thesis structure	32
1.9	Chapter summary.....	33
2	Methodology for stage one: a systematic review	35
2.1	Introduction	35
2.2	Methods	37
2.2.1	Literature Search.....	38
2.2.2	Study Selection	40
2.2.3	Data extraction process.....	43
2.2.4	Quality assessment of quantitative studies	43
2.2.5	Quality assessment of qualitative studies	44
2.2.6	Data synthesis	45
2.3	Chapter summary.....	45
3	Results for music therapy: a descriptive narrative summary	47
3.1	Study characteristics	47
3.2	Theoretical perspective and clinical methodology	59
3.3	Methods of data collection	72

3.4	Data analysis	73
3.5	Key findings.....	74
3.6	Quality of included MT studies	77
3.7	Chapter summary.....	86
4	Results for dance movement therapy: a descriptive narrative	
	summary	87
4.1	Study Characteristics	88
4.2	Theoretical perspective and clinical methodology	93
4.3	Methods of data collection.....	99
4.4	Data analysis	100
4.5	Key findings.....	101
4.6	Quality of included DMT studies	103
4.7	Chapter Summary	106
5	Discussion of the review and the development of a treatment	
	manual.....	108
5.1	Discussion of findings.....	109
5.2	Limitations of the review	114
5.3	Developing a treatment manual	115
5.3.1	The theoretical frame	116
5.3.2	A collaborative approach	118
5.3.3	A combined MT and DMT group	120
5.3.4	The frequency and duration of the group	125
5.3.5	Selecting an outcome measure for the second stage	126
5.3.6	Significant moments	127
5.4	Chapter summary.....	129
6	Methodology for Stage Two: A Community-Based Case Study...	130

6.1	Introduction	130
6.2	Ontological and Epistemological statement	132
6.3	Research design	133
6.4	Sampling strategy	135
6.5	The RMT and RDMT facilitating the group.....	136
6.6	Qualitative Data collection	137
6.6.1	The participants' experiences	138
6.6.2	The therapists' experiences	138
6.6.3	The researcher's experiences	139
6.7	Quantitative data collection	141
6.8	Analysis	144
6.8.1	Qualitative Analysis	144
6.8.2	Quantitative Analysis	147
6.9	Trustworthiness and risk of bias	147
6.10	Ethical considerations	149
6.11	Chapter summary.....	152
7	Description of the sessions, qualitative and quantitative results	153
7.1	The setting and participants	153
7.2	Description of sessions.....	158
7.2.1	Opening of group one	158
7.2.2	Middle sessions of group one.....	161
7.2.3	Ending of group one	162
7.2.4	Opening of group two	163
7.2.5	Middle sessions of group two	164
7.2.6	Ending of group two	165
7.3	Significant moments from the reflective tool	166
7.4	Clinical supervision and reflective diary	169

7.5	Emerging Theme: ‘Making connections’	171
7.5.1	Subtheme: Connecting to musicality	171
7.5.2	Subtheme: Connecting to the body.....	174
7.5.3	Subtheme: Connecting past and present	175
7.6	Emerging theme: ‘Acknowledging grief and loss’	178
7.6.1	Subtheme: peer support.....	178
7.6.2	Subtheme: expressing anger and frustration.....	179
7.6.3	Subtheme: supporting difficult feelings	180
7.7	Emerging theme: ‘Growth and empowerment’	182
7.7.1	Subtheme: an empowering experience.....	182
7.7.2	Subtheme: shared playing	184
7.7.3	Subtheme: Increased awareness of others	185
7.8	Quantitative findings	186
7.9	Chapter summary.....	189
8	Discussion	191
8.1	Findings	191
8.1.1	The value of combining MT and DMT	191
8.1.2	Challenges in combining aspects of MT and DMT	193
8.1.3	Frequency and treatment duration	195
8.2	Patterns between the qualitative and quantitative data	196
8.3	Emerging themes in the context of wider literature	198
8.3.1	‘Making connections’	199
8.3.2	‘Acknowledging grief and loss’	200
8.3.3	‘Growth and empowerment’	201
8.4	Limitations of the study.....	202
8.4.1	Recruiting participants	202
8.4.2	Risk of bias	203

8.4.3	Trustworthiness	205
8.5	Chapter summary.....	206
9	Conclusion.....	207
9.1	Practical applications and clinical implications.....	208
9.2	Recommendations for future research	210
10	References	212
11	Appendices	232

List of Tables

Table 3.1 Characteristics of included music therapy studies	50
Table 3.2 Intervention, theoretical framework and clinical methodology of the included MT studies	54
Table 3.3 Methods and times of data collection, data analysis and findings of the included MT studies	64
Table 3.4 Grading evidence of included music therapy studies (adapted from Eccles and Mason, 2001)	78
Table 3.5 Grading for trustworthiness of studies (adopted from Cooke et al.,2010)	85
Table 4.1 Characteristics of included DMT studies	89
Table 4.2 Intervention, theoretical framework and clinical methodology of the included DMT studies.....	91
Table 4.3 Methods of data collection and times, data analysis and findings of the included DMT studies.....	96
Table 4.4 Grading for trustworthiness of studies (adopted from Cooke et al (2010).....	106
Table 5.1 Aims and techniques of combined MT and DMT group based on findings from systematic review	122
Table 6.1 Stages of thematic analysis (from Braun and Clarke, 2006).....	144
Table 7.1 Characteristics of participants and sessions attended.....	155
Table 7.2 Participant quantitative scores on the Cornell Scale for Depression in Dementia Scale	187
Table 7.3 Cornell Scale for Depression in Dementia: Mean scores	189

List of Figures

Figure 2.1 PRISMA Flow Diagram of Screening Process for MT studies....	41
Figure 2.2 PRISMA Flow Diagram of the Screening Process for DMT studies	42
Figure 3.1 Risk of bias summary: review authors' judgements about each risk of bias item for each included study.....	80
Figure 3.2 Risk of bias graph: review authors' judgement about each risk of bias item presented as percentage across all included studies.....	81
Figure 6.1 Diagram showing qualitative data collection methods.....	140
Figure 6.2 Data collection schedule	143
Figure 7.1 Graph showing participants overall attendance.....	156
Figure 7.2 Example of people's positioning within the circle.....	160
Figure 7.3 The reflective tool: an affirming moment making a musical connection with James (being re-enacted between the RMT and researcher).....	166
Figure 7.4 The reflective tool: the RDMT performing an empowering moment from the session	168
Figure 7.5 participants connecting with innate musicality (image removed for reasons of confidentiality)	174
Figure 7.6 connecting through the body, touch and sensation (image removed for reasons of confidentiality)	175
Figure 7.7 connecting past and present: the group playing with ball after one group member had spoken about playing football at school (image removed for reasons of confidentiality)	178

Figure 7.8 Participant expressing frustration on cymbal (image removed for reasons of confidentiality)	180
Figure 7.9 Participants engaged in hitting balloon over stretch cloth (image removed for reasons of confidentiality)	183
Figure 7.10 Bar chart displaying individual participant CSDD scores	188

List of Abbreviations

AD – Alzheimer's disease

APA – American Psychiatric Association

AT – Art therapy

B & A – Before and After study

BEHAVE-AD – Behavioural pathology in Alzheimer's disease rating scale

CBS -QoLD – Cornell Brown Scale for Quality of Life in Dementia

CMAI – Cohen Mansfield Agitation Inventory

CSDD – Cornell Scale for Depression in Dementia

DCM – Dementia Care Mapping

DLB – Dementia with Lewy bodies

DMT – Dance movement therapy

EBP – Evidence based practice

FTD – Frontotemporal dementia

MRC – Medical Research Council

MT – Music therapy

NICE – National Institute for Health and Care Excellence

NPI – Neuropsychiatric Inventory

NRCT – Non-randomised controlled trial

PWD – Person with dementia

RCT – Randomised controlled trial

RDMT – Registered dance movement therapist

RMT – Registered music therapist

VD – Vascular dementia

1 Introduction

Chapter overview

This chapter presents a brief overview of the medical definition of dementia and the principles of person-centred care that underpin current guidelines recommended by the National Institute for Health and Care Excellence (NICE). The arts therapies are introduced as a diverse field of practice that share a person-centred ethos and are increasingly being recognised as a valuable resource in the context of dementia care. Music therapy (MT) and dance movement therapy (DMT) are key terms used to describe two arts therapeutic approaches, delivered by a registered music therapist (RMT) or registered dance movement therapist (RDMT) respectively. A brief overview of the literature considers existing Cochrane reviews and argues for the need to consider multiple types of evidence including qualitative and arts-based methodologies. The chapter ends with introducing the research questions of the study and presents the overall structure of the thesis.

1.1 Introduction

Across the world, as the population ages, dementia has become one of the most important health and care issues facing society (Department of Health, 2015). In the UK, it is estimated that 850,000 people now live with some form of dementia (Alzheimer's Society, 2016) and this number is predicted to double in the next 30 years. Dementia is a progressive illness and as yet

without cure. In the absence of a cure there has been an increased focus on living well and maintaining wellbeing for individual sufferers. The National Dementia Strategy (2009) set out a five-year plan to improve the quality of life for people with dementia and identified three key steps: achieving better awareness of dementia, early diagnosis, and the provisions of high quality treatment at whatever the stage of the illness and in whatever setting. The report also identified the overuse of medication for managing the behavioural and psychological symptoms of dementia and the need to extend research into the effectiveness of non-pharmacological methods of treating problems (Department of Health, 2009).

One of the key aspirations is that by 2020 every person with dementia will have 'meaningful care' following their diagnosis, with meaningful care being in accordance with published National Institute for Health and Care Excellence (NICE) Quality Standards (Department of Health, 2015). The increased efforts to design more meaningful, responsive services for people with dementia has seen an increased interest in the role the arts play in enriching people's lives (Beard, 2012; Windle et al, 2016). The recent All-Party Parliamentary Group on Arts, Health and Wellbeing Inquiry Report (2017) argues that the arts can 'keep us well, aid our recovery and support longer lives better lived' and 'can help meet major challenges facing health and social care: ageing, long-term conditions, loneliness and mental health' (page 4). The report highlights a growing recognition that the arts offer a range of ways to engage people, and have a unique power to help make sense of one's experience.

Arts therapists have long argued (e.g. Payne, 1993) that the ability to respond to the arts is part of being human and disability, injury or illness often leaves this unimpaired. Furthermore, the arts therapies, as forms of psychotherapy that focus on non-verbal communication, can help bring people isolated by illness and disability into relationship and thus meet psychosocial needs by addressing the whole person. It is therefore important to engage in generating evidence of how arts therapies (music, drama, art and dance movement) can support and improve the quality of life and wellbeing for people with dementia.

1.2 Common types of dementia

Medically speaking 'dementia' is used as an umbrella term to cover a range of conditions in which a person experiences a deterioration in cognitive function beyond what might be expected from normal ageing (WHO, 2017). In the DSM IV-TR (Diagnostic and Statistical Manual Fourth Edition Text Revision) the essential feature of dementia is described as the development of 'multiple cognitive deficits' that include memory impairment and at least one of the following disturbances: 'aphasia' – a deterioration of language function; 'apraxia' – an impaired ability to execute motor activities despite intact motor abilities, sensory function, and comprehension of the required task; or a 'disturbance in executive functioning' - the ability to organise, plan and carry out a set of tasks (American Psychiatric Association, 2000: 148).

In the more recent DSM-5 (Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition), published in 2013, the term 'dementia' was

subsumed under the newly named entity 'major neurocognitive disorders (NCD)'. The new criteria focus less on memory impairment and the core diagnostic feature is 'acquired cognitive decline in one or more cognitive domains' based on 'both 1) a concern about cognition on the part of the individual, a knowledgeable informant, or the clinician, and 2) performance on an objective assessment that falls below the expected level or that has been observed to decline over time.' (American Psychiatric Association, 2013). An example of an objective assessment is the Mini-Mental State Examination (Folstein, Folstein and McHugh, 1975), used to assess the progression and severity of dementia by measuring cognitive impairment.

In determining a diagnosis, different subtypes of dementia have been categorized based on symptoms and patterns of deterioration. Alzheimer's disease (AD) is the most frequently diagnosed form of dementia (APA, 2013) and thought to occur when proteins build up in the brain to form structures called plaques and tangles that lead to loss of connections between nerve cells (Alzheimer's Society, 2014). Symptoms are often manifested in three stages: the early stage may include forgetfulness or becoming lost in familiar places; as dementia progresses to the middle stage, symptoms become more pronounced and restricting, and can include having difficulty with communication, experiencing behaviour changes, or needing help with personal care; the late stage is one of near total dependence and inactivity, symptoms include becoming unaware of the time and place, having difficulty recognising relatives and friends, having difficulty walking and experiencing behaviour changes that may escalate and include aggression (WHO, 2017).

Vascular dementia is the second most common form of dementia and refers to a group of syndromes caused by different mechanisms all resulting in vascular lesions in the brain (Jacobsen, 2011). The symptoms depend on which part of the brain has been damaged but can include slowness of thought, difficulty planning and understanding, problems with concentration, mood changes, feeling disorientated and confused, difficulty walking and keeping balance (NHS, 2017). In contrast to AD where there is usually a steady decline, in vascular dementia there is often a stair step pattern of decline; the person can be stable for a long period and then deteriorate to a lower level of functioning as more blood vessels are damaged.

Other types include Dementia with Lewy bodies (DLB), which shares pathologies of both Alzheimer's disease and Parkinson's disease presenting both neuropsychiatric and motor symptoms such as slowness of movement (Ames, Burns and O'Brien, 2010). Frontotemporal dementias (FTD) may present as either a language impairment or a behavioural variant and signs include problems with speech and language and behaviours such as loss of inhibitions or neglecting personal hygiene (Quin, 2014). There is also mixed dementia or dementia-multifactorial where abnormalities characteristic of more than one type of dementia occur simultaneously; for example, Alzheimer disease is often accompanied by vascular dementia or Lewy bodies (Quin, 2014).

Making a diagnosis of dementia and getting an idea of the associated pathology is a very difficult task; there are thought to be more than a hundred different diseases that can cause dementia (Andrews, 2015). The new terminology raises questions about the concept of 'dementia' itself, and part

of the worry is to do with the stigma associated with the term (Hughes, 2014). Despite these worries, the APA (2013) suggest it will likely remain in use as a broad term that refers to a variety of conditions. The medical concept of dementia then only points to a collection of symptoms or signs and recent thinking amongst health professionals highlights the need for a broader view that focuses less on the cognitive/neurological deficits and more on the way a person with dementia is cared for as a human being (Kitwood, 1997; Brooker, 2006; Hughes, 2014).

1.3 Person-centred care

The term 'person-centred' can be traced back to the humanistic psychotherapy of Carl Rogers (Rogers, 1951; Rogers, 1961) and is characterized by three elements: empathy (understanding), congruence (genuineness) and acceptance (or unconditional positive regard). Drawing on person-centred psychotherapy, the seminal work of Thomas Kitwood (1997) first identified how basic human needs are under threat in dementia including identity, meaningful occupation, comfort and attachment and that maintaining 'personhood' is the key psychological task. Kitwood (1997) recognized that, regardless of the stage of cognitive decline, the person with dementia should remain the same equally valued person throughout the course of their illness. He promoted a 'person-centred' approach that values personal history, recognizes each person's experience as unique and emphasizes the essential subjectivity of dementia.

There is now broad consensus that the principles of person-centred care underpin good practice in the field of dementia care and they are reflected in many of the recommendations made by the NICE guidelines (2016). There is also a growing awareness that despite the loss of cognition, people with dementia maintain or in some cases increase the ability to respond emotionally to their environment (Newman-Bluestein and Hill, 2010). Coaten and Newman-Bluestein (2013) argue that arts-based practices can be utilized powerfully in dementia care, celebrating the person's ability to 'live fully' in relation to their condition, rather than in spite of it (Coaten and Newman-Bluestein, 2013:680). There is an argument that the arts have an important role in disrupting the medical model of dementia – which focuses on what is lost – to one that explores untapped resources and help people find a new sense of their changed circumstances (London Arts in Health Forum, 2017).

1.4 Arts therapies and dementia

The field of arts therapies can be seen as emerging in the twentieth century as a result of changes in a number of areas including the use of hospital artists for war veterans, arts education for remedial purposes, and the emergence of occupational therapy - the first health profession that openly acknowledged the potential contribution of the arts towards well-being (Payne, 1993; Karkou and Sanderson, 2006; Odell-Miller, 2014). In the UK, the arts therapies consist of four separate professions (art, dance movement, drama and music therapy) and share a common characteristic in that the therapists facilitating the treatment are trained in their specific art form. Training in arts therapies also

accepts trainees from a health-related, psychology, educational or social work background providing they possess the required musical/artistic skills needed to engage creatively with patients (Karkou and Sanderson, 2006). Once qualified, therapists are registered with either the Health and Care Professions Council (music therapy, dramatherapy, art therapy) or the United Kingdom Council for Psychotherapy (dance movement therapy).

Historically the field of arts therapies can be seen as moving from a small group of individual practitioners across the UK, to a professionally accredited cohesive group (Barrington, 2005). Waller (2002) describes how traditionally arts therapists worked with patients excluded from verbal psychotherapy services, beginning in the 1940s and 1950s, where the results of encouraging 'difficult' patients to engage in visual, musical or bodily expression were often positive and met with encouragement by the medical community. Arts therapists can now be found working in a variety of settings including the NHS, schools, community centres, nursing homes and prisons.

In their research-based map of the field, Karkou and Sanderson (2006) cite a number of important assumptions and special features that make the arts therapies distinctive from other neighbouring professions (such as occupational therapy, for example). These include: a wide definition for the word 'arts'; a focus on the process rather than product; a belief that engagement in the arts develops on a preverbal level; and that every art modality involves the person as a whole. There is also an emphasis on creativity to enable engagement and support therapeutic outcomes, and the additional use of imagery, symbolism and metaphor to safely assist the therapeutic process. Karkou and Sanderson (2006) argue that arts therapists

draw upon therapeutic approaches and use principles deriving from humanistic psychotherapy, psychodynamic thinking, developmental approaches, active/directive and artistic/creative practices, while in most cases an overall eclectic/integrative frame underpins the work.

In the UK, Aldridge (2000) writes that arts therapists started working with people with dementia in the 1980s. Previous to that, psychotherapists were pessimistic about the potential benefits for older people with dementia (Burns, 2009). However, in the late 1980s, the shift away from the disease to the person led professionals to develop new ways of engaging with people with dementia with greater interest in their psychological needs (Kitwood, 1997). Since then a number of arts therapists have used their skills to support people living with dementia. Jennings (1998) suggested maintaining playfulness through dramatherapy may contribute to a feeling of wellness in older people with dementia. Waller (2002) provided an early definition for arts therapies work with this client group as: 'person centred' and importantly, building on 'the positive attributes of patients, assuming that all can be creative at some level' (p.2). She details how a skilled therapist 'assesses the patient's capabilities, gently encouraging and supporting even the smallest sound, mark or movement' (Waller, 2002:2).

In her PhD investigation, Burns (2009) found arts therapists working in dementia care were engaged in an emergent practice, often employing multiple methods to engage their clients; and that theory and practice were being adapted to accommodate the temporal nature of the work. A person-centred approach was the primary psychotherapeutic influence across all arts therapies disciplines (art, dance movement, drama and music therapy) and

there was a suggestion that to facilitate creative exploration and engagement, therapists may need to adapt practice to provide correct level of direct and non-directive support (Burns, 2009).

In a systematic review across the arts therapies, Beard (2012) observed how each modality works to empower participants, stimulating interaction and meaningful activity for older adults with dementia. Within the literature, Beard (2012) found music therapy to be the most common modality but research on art, drama and dance movement therapy did exist. In her critique of the evidence base she cites a lack of self-reports from participants with dementia, failure to extend therapies to individuals in the early stages of the disease, a lack of application to those living at home, and 'often superficial attention to the meaningful aspects of *doing art*' (p.633). She calls for more investment into the process of arts therapies using appropriate research methods that can 'track variables such as the subjective wellbeing' of those living with dementia (Beard, 2012:647).

1.5 Evidence-based practice and existing Cochrane reviews

It is now accepted that today's health care practitioner, regardless of discipline or background, will function from an evidence-based perspective (Davies, 2012). Evidence-based practice (EBP) can be defined as the 'conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients' (Sackett et al., 1997, p.71). It emerged from medical practice in the early 1990's and has been described as a paradigm with its own philosophical framework, where the application of scientific

research evidence plays a critical role (Gilroy, 2006; Bradt, 2012). Under this paradigm, research evidence tends to be of numerical character to show that a treatment works across generalised populations. Study designs are placed in a hierarchy of evidence (Evans, 2003) and one prominent feature of EBP has been the emphasis on randomised controlled trials (RCTs) as the top tier of this grading system to determine whether a treatment is effective (Evans, 2003; Moore et al, 2015).

An RCT is a study design in which a number of similar people are randomly assigned to two or more groups to test a specific treatment. The concept was designed for pharmacological studies involving a large number of people. The study compares changes in people who have undergone treatment with changes in a similar group of individuals who have not had treatment to establish that any intervention is responsible for change. Outcomes are assessed at certain times and any difference between the groups is statistically analysed. The methods involved in RCT designs ensure that it removes bias and therefore produces the most reliable form of evidence and is known as the 'gold standard' (Cooper, 2008). Ideally a number of RCTs can be collated in a meta-analysis and the outcomes can help to give an indication of treatment effect as part of a systematic review.

The Cochrane Database of Systematic Reviews is recognised as the pinnacle of evidence-based health care (Higgins and Green, 2011). To date there have been Cochrane reviews of studies in dementia in music therapy (MT), dance movement therapy (DMT) and art therapy (AT); all the reviews only include RCTs as the top tier of the evidence hierarchy. A recent Cochrane review of MT (van der Steen et al, 2017) investigated whether

'treatments based on music' improve the emotional well-being and quality of life of people with dementia. The included studies involved people living in care homes with all severities of dementia. The authors considered 17 RCTs and performed a meta-analysis on a range of outcomes. In general, the quality of the trials, variations in outcome measures and small samples affected confidence in results. However, their meta-analysis suggest confidence that music-based therapies improve symptoms of depression in older adults with dementia living in care homes. The review concluded that providing people with dementia with at least five sessions of a music-based treatment probably reduces depressive symptoms but has little or no effect on agitation, emotional wellbeing or quality of life, overall behavioural problems and cognition. However, due to the low methodological quality of the evidence there remains uncertainty regarding effectiveness, and questions remain of how the therapy should be delivered. For example, not all the studies involved a registered music therapist (RMT) and instead were delivered by nurses or psychologists.

Dance movement therapy (DMT) is a discipline closely aligned with MT and also a treatment option for people with dementia. The recent Cochrane review of DMT and dementia (Karkou and Meekums, 2017) found no studies of sufficient methodological quality. The strict eligibility criteria meant that although three studies were identified they had to be excluded as the delivery did not involve a registered dance movement therapist (RDMT). For example, Hokkanen et al (2008) conducted an RCT with 29 participants with dementias (19 in the intervention, 10 in the control). The study focused on cognitive outcomes and suggests a slight improvement in the DMT group in tasks

involving visuospatial ability and planning. However, the study was excluded as it was nurses rather than RDMTs that facilitated the intervention (DMT input was limited to monthly supervision).

The other excluded studies were conducted by Hwang and Choi (2010) who focused on measuring cognitive performance with a word list memory test, and Hamill, Smith and Rohricht (2011) who measured cognitive improvement using the MMSE (Folstein, Folstein and McHugh, 1975), as well as quality of life using the Quality of Life Scale in Alzheimer's Disease (Logsdon, 1999). The latter study was excluded on the basis that the intervention was provided by a senior clinical psychologist and a senior nurse with no specific DMT training. In contrast, the Cochrane review on 'music-based therapeutic interventions' (van der Steen et al, 2017) took a broader view and attempted to include all RCTs in which music had been used with a therapeutic purpose (only seven of the 17 included studies were definitely delivered by a RMT).

A recent Cochrane review into art therapy (AT) for people with dementia (Deshmukh, Holmes and Cardno, 2018) found two studies that met the inclusion criteria. One hospital-based study from Japan (Hattori, Hattori, Hakao, Mizushima, Mase, 2011) compared group AT with performing simple calculations over twelve weeks. The findings indicate that there was an improvement in the MMSE (Folstein, Folstein and McHugh, 1975) score in the calculation group compared with the AT group, however, a quality of life scale favoured the AT group. The other included study (Rusted, Sheppard and Waller, 2006) took place in a community day centre and compared group AT to recreational activities over a 40-week period. The study found that anxious

and depressive symptoms increased in the AT group compared to the control, but this may have reflected baseline scores (the AT group scored higher on depression at baseline). No changes were reported in measures of cognition, memory or attention.

1.6 Gaps in the evidence-base and other research methodologies

Although RCTS are regarded as the gold standard for establishing effectiveness of health interventions, often they do not provide sufficient information on how an intervention works in their specific context (Bradt et al, 2013). Also, the concept is not readily applicable to the small sample sizes and heterogeneous clinical population typical of arts therapies studies (Gilroy, 2006). In building an evidence base for arts therapies, it is equally as important to understand how these complex interventions work in practice (Aldridge, 2005; Bradt, 2012). Updated guidance from the Medical Research Council (Moore et al, 2015) now recognises the value of process evaluation for complex interventions and argues for a systematic approach focusing on how an intervention is implemented, the mechanisms through which it brings about change, and how context affects implementation and outcomes. This new framework highlights a need for a combination of quantitative and qualitative methods appropriate to the research question.

Within arts therapies literature, there has long been an argument that research needs to stay close to clinical practice and therefore requires a variety of methodologies. Edwards (2016) highlights how qualitative methods

have become increasingly important to capture both process and patient experiences. Qualitative research relies on words, music, sounds or pictures to report results and reveal aspects of the therapeutic setting (Wheeler, 2016). Aldridge (2005) argues that each therapeutic situation is 'seemingly unique' and suggests a case study design bound in context can provide rich and reliable information using multiple data. His book provides guidelines for case study design that concentrates on providing applicable results but recognises that evidence, while being of recognised scientific value, is 'multifarious in its forms and intentions' (p.212).

McNiff (1998) also describes the case study as an especially useful model for art therapy research as it fosters a close connection between researchers and the process of therapy. He argues that the situations of arts therapy practice are infinitely variable and research should therefore resonate with the artistic process inherent in arts therapies (p.160). Furthermore, as many features of the arts therapy experience are inseparable from practice, he advocates including arts-based methods as a way of understanding experience. In contemplating evidence, he suggests that arts-based evidence can further enhance the case study format to be 'expressive of the unique dynamics of the creative process' (p.159). It should be noted that McNiff (1998) defines 'arts-based' as a specific research methodology to generate data to help understand the significance of the arts therapies process. His ideas have been embraced by other arts therapists, including dance movement therapists. For example, Hervey (2000) explores the possibilities of dance as a means of representation arguing that within a therapeutic context, arts therapists work 'creatively, artistically and aesthetically' (p.110)

and as such, these types of information need to also be considered as important research information.

1.7 Motivation for the research – why MT and DMT?

Across cultures, music and dance satisfy people's need for social connection, making environments where people can be engaged, creative and meaningfully alive (Malloch and Trevarthan, 2009). The two art forms are complementary as people dance to music and people move when listening to music. There is now also increasing evidence that music and dance can help reduce the negative behavioural and psychological symptoms of dementia (McDermott et al, 2013; Guzman Garcia et al, 2013) promote social and emotional wellbeing (Coaten, 2001; van der Steen et al, 2017) and support communication with family members and care-givers (Coaten, 2009; Camic et al, 2011). The expressiveness of music and dance has also been linked to vitality (Stern, 1985).

Arts therapy literature has shown how MT and DMT engage people across all stages of dementia and are successful even without previous music or dance experience (Aldridge, 2000; Clair, 2016). The Cochrane reviews in dementia suggest evidence for MT (van der Steen et al, 2017) and some support for DMT, although the existing studies lacked sufficient methodological quality (Karkou and Meekums, 2017). In contrast, the Cochrane review of art therapy indicates negative trends in terms of reducing depression and in dramatherapy there is as yet no evidence available. The interconnectedness between music and dance and the evidence emerging

from existing Cochrane reviews were the principle reasons for focusing this investigation on MT and DMT.

As regulated health care professions requiring high standards of conduct, performance and ethics, MT and DMT are well placed to respond to the individual needs of older adults with dementia. As distinct professions, DMT uses the body and encourages movement as an implicit and expressive instrument of communication (Association for Dance Movement Psychotherapy UK, 2018); MT uses music to connect with people through engagement in a live musical interaction (British Association of Music Therapy, 2018). Frequently in dementia care, music is used in DMT sessions and movement is a feature of MT sessions, and both work to establish non-verbal dialogue and attune empathically with clients.

Building on the links between MT and DMT, this thesis explores whether collaborating might offer opportunities to maximise the research evidence for arts therapies in dementia. Theoretically, they are closely aligned disciplines that both embrace non-verbal communication, intersubjectivity, affect and embodied expression, all of which are essential dimensions of experience and care when it comes to dementia (Coaten, 2001; Malloch and Trevarthen, 2009; Kontos and Grigorovich, 2018). It also focuses on the therapeutic components and the potential of elements of the two disciplines being brought together. The limited literature in this area suggests that when used jointly as one intervention, MT and DMT may be effective for some clinical populations (Colbert and Bent, 2018). However, as yet there is no evidence of a combined MT and DMT group for older adults with dementia.

Research questions

The research question guiding the first stage of the study was:

What is the evidence that MT and DMT improve health and wellbeing for older adults with dementia?

In order to maximise findings from these disciplines, and clarify questions regarding the therapeutic process, I conducted a systematic review of primary sourced quantitative and qualitative studies (with or without arts-based methods). The review is concerned exclusively with the practice of MT and DMT (and not wider music and dance studies) and identifies patterns across studies and gaps in the existing literature regarding contexts. It also posits a theoretical framework and key therapeutic components. The evidence informed a study protocol that was used in the second phase of the study.

The overall research question guiding the second stage was:

What is the value of a combined MT and DMT group for older adults with dementia living in the community?

In particular, the second stage of the PhD asked two questions:

- *How did changes in participants' creative expression facilitate significant moments in the therapy process?*

- *Did a combined MT and DMT group improve participants' symptoms of depression?*

The first sub-question examined the qualitative experience by focusing on movement and musical interplay between the therapists and the participants. Within psychotherapy literature, significant moments often refer to helpful or hindering processes within therapy, usually identified by the client such as insight, behavioural change, new feelings and empowerment (Timulak, 2007). However, in a study like this, participant's experiences cannot be shared verbally because of the limitations of people's memory and varying/deteriorating verbal skills caused by their dementia. Instead the qualitative data collected draws on words where available but also used an arts-based reflective tool to generate additional data in the form of dance/movement and music/auditory information. The latter sub-question aimed to provide some preliminary information regarding a relevant health outcome. The multiple forms of data collected aimed to provide a more in depth understanding of the value of a community-based group for older adults with dementia.

1.8 Thesis structure

The first stage of the study collates a broader range of research evidence to examine both MT and DMT in the treatment of dementia. Chapter 2 provides the methodology for a systematic review and describes the search strategy, screening process, data extraction and quality assessment methods used in

order to find and appraise the evidence. The MT findings of the review are presented in chapter 3 and the DMT findings in chapter 4. The results are presented in the form of a descriptive narrative summary, documenting relevant outcome measures as well as the theoretical perspectives and clinical methodologies of the included studies.

Chapter 5 provides a discussion of key findings from both disciplines and presents a research-based treatment manual for a combined MT and DMT group to be used in the second stage. Chapter 6 presents the methodology for a community-based case study involving the collection of quantitative and qualitative data, including an arts-based reflective tool. Chapter 7 provides a description of the group sessions and a thematic analysis of the therapeutic process. It also presents the small but significant quantitative findings. Chapter 8 details the discussion, discussing the rewards and challenges of combining MT and DMT, and comparing both quantitative and qualitative findings in light of existing literature. It also presents the limitations of the study in terms of risk of bias and trustworthiness. Chapter 9 provides a conclusive overview, highlighting practical applications and clinical implications of the study and recommendations for future research.

1.9 Chapter summary

This chapter has provided an introduction to dementia and arts therapies research. It has suggested that the arts may have an important role in disrupting the medical model of dementia and offer the possibility of maintaining personhood through enhancing the care relationship. It has been

argued that as regulated professions, MT and DMT are well placed to respond safely to the psychosocial needs of older people with dementia. It has reported on existing Cochrane reviews and highlighted a need to consider a wider range of evidence, including qualitative and arts-based methodologies. Finally, the chapter ends with the research questions being addressed and provides the overall structure of the thesis.

2 Methodology for stage one: a systematic review

Chapter Overview

The previous chapter provided an introduction to arts therapies research in dementia care. It suggested that multiple forms of evidence are needed to understand how the arts therapies contribute to health and wellbeing of older adults with dementia. This chapter describes the methodology for a systematic review of quantitative and qualitative evidence, including arts-based methodologies. It reports the inclusion and exclusion criteria used, the databases/sources reviewed, and the search terms employed. It also details the screening process, how the data was extracted and the methods of appraisal.

2.1 Introduction

The rationale for this particular systematic review was to incorporate multiple types of evidence to fully evaluate music therapy (MT) and dance movement therapy (DMT) as a potential treatment for older adults with dementia. Too often the conclusions of systematic reviews, and systematic reviews that follow the restrictive inclusion criteria of Cochrane Reviews (Higgins and Green, 2011), state that there is not enough research evidence or not enough

good quality research evidence. By including other forms of evidence from different types of research designs, this review aimed to maximize research findings and combine process and outcome to gain a more in depth understanding of these interventions.

There is increasing awareness that the arts can support the wellbeing for older people with dementia, however, the nature of arts therapies and how and why they should be delivered remains vague and unclear (Beard, 2012). This review focuses specifically on studies led by registered music therapists (RMT) and registered dance movement therapists (RDMT) and excludes interventions undertaken by carers or other professionals (for example, live musicians, nurses, psychologists). One of the aims is to further illuminate aspects of the therapeutic process integral to the arts therapies profession. The overall research question guiding this first stage of the study is:

What is the evidence that MT and DMT improve health and wellbeing for older adults with dementia?

In particular, the following aims addressed here are:

- 1) To investigate a broader range of quantitative and qualitative evidence, including arts-based methodologies.
- 2) To identify the theoretical perspectives and clinical methodology of the interventions studied.
- 3) To focus on positive therapeutic outcomes of health and wellbeing (considering the experiences of people with dementia participating in these studies).

The review aimed to bring together studies using quantitative and qualitative (including arts-based) methodologies in an evidence synthesis. On the whole, Cochrane Review (Higgins and Green, 2011) conventions and processes were adopted, and the review followed the Preferred Reporting Items for Systematic Review and Meta-Analysis (PRISMA statement) guidelines (Moher et al., 2010). These guidelines encourage the transparent reporting of systematic reviews by following an evidence-based minimum set of items. The methods sections from the PRISMA checklist are presented here followed by the MT results in chapter 3 and DMT results in chapter 4.

2.2 Methods

A protocol was written and registered with PROSPERO (Lyons et al 2015). A modified version of the PICOS framework (Booth, 2008) using primarily three elements (participant population, intervention and study design) helped determine the criteria used to include and exclude studies. The types of study that the search aimed to include were empirical research studies of intervention or descriptive studies including quantitative and qualitative. Arts-based methodologies were also considered as a form of qualitative research. Studies with both qualitative and quantitative methods in their designs were also considered. All non-empirical research studies (e.g. secondary sources, opinion-based) were excluded. All systematic reviews were also excluded but screened for relevant studies. For the participant population, studies were included that were conducted for older adults (65+) with a diagnosis of any

type of dementia. Studies with mixed populations where most of the population had a diagnosis of dementia were also included. Studies with participants with no reported age, or those with a mean age of less than 65 were excluded. All types of setting were considered including both community and continuing care settings. The inclusion criteria for the MT and DMT intervention was: the therapeutic use of music or dance and movement to promote patients' health and well-being, delivered by a registered arts therapist (where training is available). The intervention also required a systematic therapy process (for example, assessment, individual goal setting, treatment and evaluation).

2.2.1 Literature Search

Electronic healthcare databases MEDLINE, PSYCINFO, CINAHL, EMBASE, AMED were searched with no date restrictions up to 22 May 2017. Additional searches were conducted of PROSPERO, the Cochrane Database of Systematic Reviews, reference lists of identified papers and hand searches of relevant books, journals and previous systematic reviews. There was no limit on publication date for eligibility of studies but they were limited to the English language. Appropriate search terms were identified from previous similar reviews and in consultation with the research team and a university library information scientist was sought for advice on best possible tactics in the use of wildcard symbols and truncations. The following key words were used:

Search terms:

Step 1:

Dement* OR Alzheimer's OR fronto-temporal OR Lewy bodies OR vascular
OR Creutzfeldt-Jakob

AND

older OR elder* OR geriatric OR 65+ OR ag*

Step 2:

Music* OR music therap* OR music psychotherap* OR therapeutic music OR
singing OR musical instrument OR vibro acoustic OR auditory stimulation OR
improvisation

OR danc* OR dance movement therap* OR movement therap* OR dance
therap* OR movement psychotherap* OR therapeutic dance OR authentic
movement OR primitive expression

Step 3:

RCT OR randomised controlled trial OR randomized controlled trial OR case-
control* OR cohort stud* OR case stud* OR artistic inquiry OR artistic enquiry
OR ethnograph* OR observation* OR participant observation* OR survey* OR
interview* OR patient experience OR client experience OR practice-led
research OR practice led research OR evidence based OR empirical OR
meta-analys* OR systematic review* OR narrative synthes* OR integrative
review OR quantitative OR qualitative OR mixed method* OR art* based
research OR art*-based

2.2.2 Study Selection

Identifying included studies for a systematic review consists of four stages: identification, screening, eligibility and inclusion (Moher et al, 2010). In the first instance, relevant studies were identified removing 'noise' (i.e. irrelevant studies) and duplicates. At the second stage all studies were screened at a title/abstract level. Studies were excluded if they did not meet the inclusion criteria of 1) study design 2) population 3) intervention. The third stage consisted of reading the full text in order to establish eligibility for inclusion of potentially relevant studies; the same criteria were used. Where full texts could not be obtained through online journals inter library loans were requested, or where possible the authors were contacted.

The combined search for 'music therapy' and 'dance movement therapy' generated 1260 hits, of which 739 were removed as irrelevant or duplicate citations. 521 studies were then taken forward for more detailed abstract review. The screening was undertaken by the primary researcher (SL) and checked independently by a second reviewer. Of these 521 studies, 333 were excluded on the grounds of study design (161), population (53) or intervention (119). Following evaluation and discussion of the remaining 188 potential studies, a further 161 studies were excluded on the grounds of study design (15) population (14) and intervention (132). This left 22 MT studies (see Figure 2.1) and five DMT studies (see Figure 2.2) to consider as part of the systematic review.

Figure 2.1 PRISMA Flow Diagram of Screening Process for MT studies

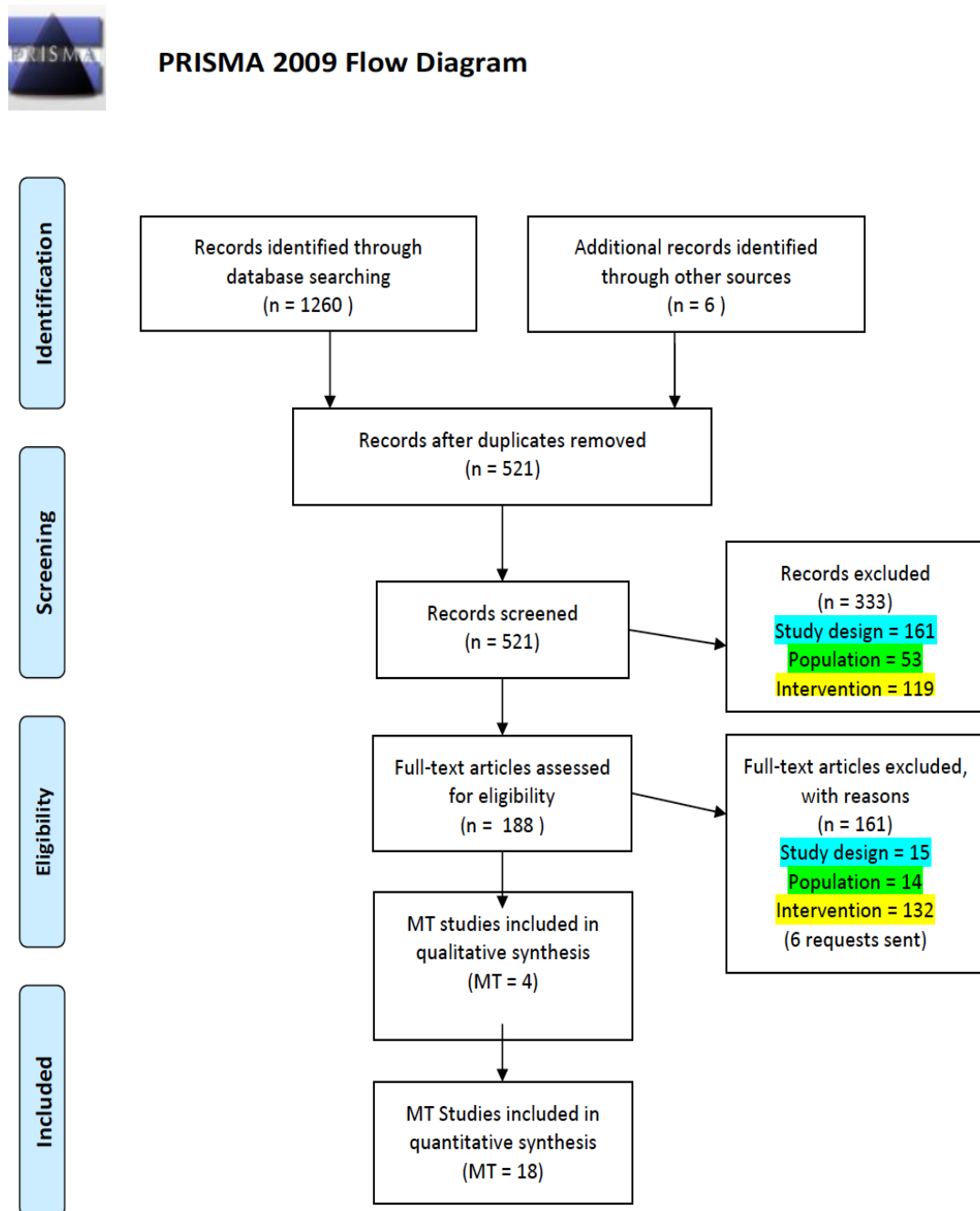
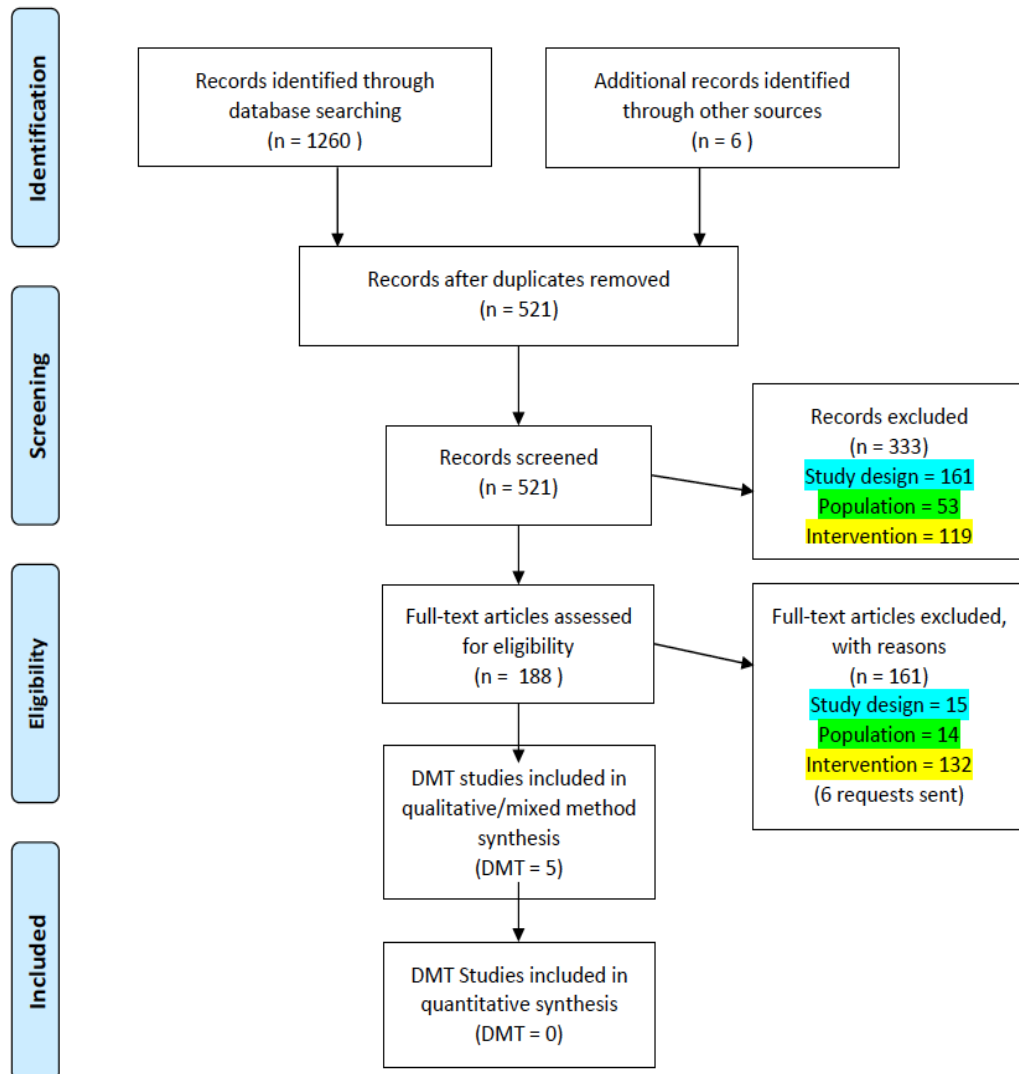


Figure 2.2 PRISMA Flow Diagram of the Screening Process for DMT studies



PRISMA 2009 Flow Diagram



2.2.3 Data extraction process

The data were extracted by the primary researcher using a data bespoke extraction form designed in consultation with the research team. The following data was extracted from both quantitative and qualitative studies: source of study, authors (date), country, design, focus of study, setting and context, sampling strategy and sample size, participants, mean age, gender, type and level of dementia, frequency and duration of intervention, theoretical perspective of intervention, clinical methodology of intervention, main outcome measures, main data collection methods, other methods of data collection, time of data collection, statistical analysis/analysis of data and findings (see appendix one for the data extraction sheet).

2.2.4 Quality assessment of quantitative studies

Each of the studies was categorized according to NICE levels of evidence (see appendix two for recommended grading scheme). In this grading scheme RCTs were considered the top level of evidence (A1), followed by controlled trials at an intermediate level (B2a), followed by non-controlled trials (B2b) followed by case studies at a lower level (B3). The 'risk of bias' assessment tool (Higgins and Green, 2011) was used to assess the quality of the included quantitative studies. This looks at potential threats to validity including:

- selection bias (e.g. random sequence generation, allocation concealment)
- performance bias (e.g. blinding of participants and personnel)
- detection bias (e.g. blinding of outcome assessment)

- attrition bias (e.g. incomplete outcome data)
- reporting bias (e.g. selective reporting)

After considering all threats to validity the studies were then summarised to be of 'high risk of bias', 'unclear risk of bias' or 'low risk of bias' as recommended in the Cochrane guidelines (Higgins and Green, 2011).

2.2.5 Quality assessment of qualitative studies

Different philosophical underpinnings have led to issues regarding quality in qualitative research, leading to wider debates about the nature of knowledge and whether qualitative research can be judged by the same criteria as quantitative health research (Mays and Pope, 2006). By nature, qualitative research is an interpretative act with different epistemological status and therefore needs different techniques (than reliability and validity) to impose rigour and the application of quality criteria (Walsh and Downe, 2005).

For this review, a grading system was used based on the work of Lincoln and Guba (1985) who highlight the need for trustworthiness of study. To appraise the trustworthiness (credibility, transferability, dependability and confirmability) of the qualitative findings an ABCD grading system was adopted as used in Cooke et al (2010). Using this system, the overall quality of the studies varied from A (no, or few flaws) to D (significant flaws very likely to affect the credibility, transferability, dependability and/or confirmability of the study). Potential strategies to determine trustworthiness included:

- Member checking (to achieve credibility)

- Triangulation (to achieve credibility)
- Prolonged engagement and persistent observation (to achieve credibility)
- An audit trail (to achieve dependability/confirmability)
- Reflexivity (to achieve dependability/confirmability)
- Thick descriptions (to achieve transferability)

Other criteria included: whether the study displays a clear rationale/purpose; if the design is consistent with the research intent; if the sample and sampling method is appropriate; and whether there is a clear evidence to support the interpretation of results (Walsh and Downe, 2006; Houghton et al, 2013).

2.2.6 Data synthesis

The results of the review are presented in a descriptive narrative summary.

The heterogeneity of the studies and lack of agreed outcomes meant there was limited scope for a meta-analysis. Instead, a descriptive narrative summary aims to inform readers of important things about the study populations, design and conduct of studies, and facilitate the examination of patterns across studies (Liberati et al, 2009).

2.3 Chapter summary

This Chapter has presented the methodology for the systematic review. The aims of the review were to collate a broad range of evidence, identify the theoretical perspectives and clinical methodologies of the therapies, and consider participant experience. The methods used to screen, extract and appraise the research evidence have been described. The next chapter will

present the results of the review in the form of a descriptive narrative summary.

3 Results for music therapy: a descriptive narrative summary

Chapter Overview

This chapter presents the findings of the systematic review in the form of a descriptive narrative summary. The MT studies are presented here followed by the DMT studies (chapter 4). The data extracted is displayed in tables and summarised accordingly following PRISMA guidelines documenting study characteristics, theoretical perspectives and clinical methodologies, methods of data collection and analysis. The key findings are highlighted from both quantitative and qualitative studies. Each of the studies was categorised according to NICE levels of evidence and assessed for risk or bias and trustworthiness using a grading system.

The overall research question guiding the review was:

What is the evidence that MT and DMT improves health and wellbeing for older adults with dementia?

3.1 Study characteristics

Participants, setting and study design

Table 3.1 presents the results of the 22 MT studies that survived the review scrutiny. In total 902 participants were involved across the studies. The

largest sample of participants (N=120) was used in Kwak et al (2013) and Raglio et al (2015). The majority of studies involved participants with dementia of the Alzheimer's type (15) of moderate to severe level – though in a number of studies the type and level of dementia are not provided (e.g. Ahonen-Eerikainen et al, 2007; Tuckett et al, 2015). One study provided a case study of an individual with late stage frontotemporal dementia (Ridder and Aldridge, 2005).

The included studies took place in nursing homes (16), followed by specialist dementia units (3). There was one rural study in Spain (Brotons and Marti, 2003), and one study reported taking place on a geriatric hospital ward (Ridder et al, 2005). There was only one community-based group study (Ahonen-Eerikainen et al, 2007), and one study involved individual MT in a home setting (Schall et al, 2015). Very few studies reported a formal sample size calculation. For example, Hsu et al (2015) indicated a pragmatic approach reporting that residents were recruited from the nursing home's pool of MT referrals following set inclusion criteria and the sample size was selected based on what would be feasible for music therapists, researchers and care staff.

The 22 included MT studies show a range of study design. Significantly, the majority of studies were RCTs (10); ten of these were parallel group and three within group. There were also four non-randomised controlled trials (NRCT): in Ashida (2000) each participant served as their own control in a 01 02 x 03 design; Ledger and Baker (2007) used a between group controlled study, as did Suzuki et al (2004) and Raglio et al (2008). The majority of controlled studies used standard care as the controlled condition

(7). Other controlled conditions employed included: entertainment and activities (Raglio et al, 2008; Raglio et al, 2010); recreational activities (Vink et al, 2013) conversation (Brotons and Koger, 2000); physical activity such as games and drawing (Suzuki et al, 2004). There were four before and after studies or pre/post-test designs, which employed outcome measures but did not use a control condition (Brotons and Pickett Cooper, 1996; Brotons and Marti, 2003; Sole et al, 2014; Schall et al, 2015). Remaining were four qualitative studies: two descriptive case studies (Kydd, 2001; Ridder and Aldridge, 2005), one narrative inquiry employing grounded theory (Ahonen-Eerikainen et al, 2007) one focus group using semi-structured interviews (Tuckett et al, 2015).

Table 3.1 Characteristics of included music therapy studies

Author	Participants (Sample size; type and level of dementia)	Setting	Study Design
Ahonen-Eerikainen et al (2007)	N=6; dementia varying degrees and types (not specified)	Day centre in Canada	Qualitative observational study
Ashida (2000)	N=20; type and level of dementia not reported	Nursing home in USA	NRCT (01 02 X 03 design)
Brotons & Koger (2000)	N=26; majority moderate Alzheimer's	Nursing home in USA	RCT (within group)
Brotons & Pickett-Cooper (1996)	N= 47; probable Alzheimer's	Nursing home in USA	Before & After (B&A)
Brotons & Marti (2003)	N=28; probable Alzheimer's; early to moderate stage	Residential centre in Spain	B&A
Chu (2014) & Lin (2011)	N=104; majority moderate dementia (62%)	Nursing homes in Taiwan	RCT (parallel group)
Hsu et al (2015)	N=17; (Alzheimer's = 7; Vascular = 2; Frontal lobe = 2; Lewy body = 2; Mixed = 1; Unspecified = 3)	Nursing home in UK	Mixed method; RCT (parallel group and video presentation)

Kwak et al (2013)	N=120; moderate Alzheimer's (not specified)	Nursing home in Korea	RCT (no details reported)
Kydd (2001)	N=1 probable Alzheimer's	Nursing home in USA	Qualitative: Case study
Ledger & Baker (2007)	N=60 (45 completed study); moderate to severe Alzheimer's	Nursing home in Australia	NRCT (parallel group)
Raglio et al (2010)	N=60; severe dementia	Nursing home in Italy	RCT (parallel group)
Raglio et al (2008)	N=59; moderate to severe dementia	Nursing home in Italy	NRCT (parallel group)
Raglio et al (2015)	N=120; moderate to severe dementia	Nursing home in Italy	RCT (3 parallel groups)
Ridder et al (2013)	N=42; moderate to severe dementia	Nursing home in Denmark	RCT (within group)
Ridder & Aldridge (2005)	N=1; Late stage frontotemporal dementia	Gerontopsychiatric unit in Denmark	Qualitative: Case study
Schall et al (2015)	N = 14; majority Alzheimer's	At client's house in Germany	B&A

Sole et al (2014)	N=16; majority probable mild cognitive impairment	Nursing home in Spain	B&A
Suzuki et al (2004)	N= 10; majority Alzheimer's	Dementia specialist unit in Japan	NRCT
Svansdottir et al (2006)	N=38; moderate to severe Alzheimer's	Nursing home in Iceland	RCT (parallel group)
Tuckett et al (2015)	Not reported; group sizes ranged from 3-9 participants; Dementia (type and level not given)	Nursing home in Australia	Qualitative: Semi-structured focus groups
Vink et al (2013)	N=94; majority severe Alzheimer's disease	Nursing home in the Netherlands	RCT (parallel group)

Note: RCT = randomised controlled trial; NRCT = non-randomised controlled trial; B & A = before and after study

Type, frequency and duration of interventions

Table 3.2 shows that group MT intervention (16 studies) was more common than individual MT (6 studies) and the number of participants in the groups ranged from three to ten people. The majority of included studies were short term interventions ranging from five to 16 sessions, and the frequency varied from once, twice sometimes three times a week. There were exceptions, for example, the Ashida (2000) study was five times daily over one week. Ridder and Aldridge (2005) started daily but became less intensive as treatment progressed. Two studies (Vink et al, 2013; Hsu et al, 2015) lasted more than six months and the longest study was by Ledger and Baker (2007), which lasted for 42 weeks over the course of a year.

The majority of sessions appeared to be 30 minutes although session duration was unreported in a number of papers (e.g. Kwak, 2013; Kydd, 2001). The shortest intervention was Ridder and Aldridge (2005) at 20-30 minutes; and the longest Suzuki et al (2004) that reportedly took place weekly between 10-11am (60 minutes). Some studies varied in duration and were flexible to the needs of the client (e.g. Ridder et al, 2013). Tuckett et al (2015) suggest that the timing and duration of the MT for people in nursing and residential care remains a vexatious issue.

Table 3.2 Intervention, theoretical framework and clinical methodology of the included MT studies

Included studies	Intervention, frequency, duration	Theoretical perspective	Clinical methodology
Ahonen-Eerikainen et al (2007)	12 group sessions over 4 months. Session duration: not reported	Humanistic psychotherapy	Psychotherapeutic process: participants are first allowed to deal with their feelings in a safe environment; group led musical experiences to help with lack of confidence and making the group members feel good about themselves
Ashida (2000)	5 group sessions 5 x a week (daily over 1 week). Session duration: ranged from 38-45mins	Not reported; song based (reminiscence)	RMT singing songs. Topics of reminiscence varied from day to day (home, nature, hobbies, love songs)
Brotons & Koger (2000)	MT group 2 x a week (Crossover 2 weeks and 2 weeks). Session duration: 30 mins	Not reported; song based	RMT sang songs to introduce and provide structure for subsequent discussion and conversation
Brotons & Pickett	5 group MT sessions (twice a week).	Behavioural/activity based	Musical activities adapted to the subjects level of functioning (e.g. singing, playing

Cooper (1996)	Session duration:30 mins		instruments, dance/movement, musical games and composition/improvisation)
Brotons & Marti (2003)	10 sessions of group MT over 12 days. Session duration: not reported	Behavioural/activity based	A variety of music activities, music listening, singing, instrument playing, and movement/dance
Chu (2014) & Lin (2011)	12 group music therapy (twice a week for 6 weeks). Session duration: 30 mins	Behavioural/activity based	RMT used the Clair and Bernstein protocol (1990) based on structured musical activities, rhythm and movement
Hsu et al (2015)	5 months of individual MT (weekly). Session duration: 30 mins	Improvisation based with links to person centred care & further informed by affective neuroscience	The RMTs used their musical, vocal, bodily and facial expressions as affective cues which could directly trigger patients emotional and somatic reaction
Kwak et al (2013)	12 sessions of group MT (weekly). Duration: not reported	Behavioural/activity based	Rhythm playing with instrument, exercising with music, singing of old Korean pop songs
Kydd (2001)	Individual sessions over 8 months (unclear). Session duration: 30 mins	Not reported - looks like client led	Allowing client to choose songs that he would like to hear; the MT would sing and play piano, encouraging P to sing along and sometimes play instruments

Ledger & Baker (2007)	42 group sessions (weekly over one year). Session duration: 30-45 mins	Not reported; involved listening to live music, song requests and discussing feelings and memories	The musical content varied depending on participants assessed needs, abilities, backgrounds and musical preferences. Similar overall structure (greeting-main section song requests- farewells)
Raglio et al (2010)	3 cycles of 12 group MT sessions 3 x a week (each cycle followed by 1 month washout). Duration: 30 mins	Improvisation based	Participants and RMTs interact and express their feelings through non-verbal behaviours and using musical instruments
Raglio et al (2008)	30 sessions of group MT (3 x 10 sessions of 3 cycles over 16 weeks). Duration: 30 mins	Improvisation based	RMT used instruments to promote intersubjective communication.
Raglio et al (2015)	20 individualised MT or listening to music twice a week (10 weeks). Session duration: 30 mins	Improvisation based	RMT used singing and instruments to facilitate the expression of emotions, promoting affect attunement.
Ridder et al (2013)	12 individual sessions (twice a	Improvisation based with links to person centred	RMT instructed to catch attention and create a safe setting; regulating arousal level to a

	week for 6 weeks). Session duration: 33.80 minutes (Standard deviation = 9.91)	care and psychosocial model	point where self-regulation is possible; and engaging in psychosocial communication in order to fulfil psychosocial needs
Ridder & Aldridge (2005)	20 individual sessions (first week daily then less intensive). Session duration: 20-30 mins	Improvised/ relational MT and physiologically based arousal	Therapeutic singing where well-known songs are applied in order to build up structure and stability and/or as means of arousal regulation
Schall et al (2015)	20 individual sessions (over 6 months). Session duration: 23-39 minutes	Behavioural incorporating active and receptive elements	Singing and instrumental improvisation as well as listening to biographically relevant music
Sole et al (2014)	12 group sessions (weekly). Session duration: 45-60 mins	Behavioural/activity based	Stimulate cognitive function, social interaction and motor skills through playing musical instruments. Music activities included singing, listening to music, playing musical instruments, composition/improvisation and movement
Suzuki et al (2004)	16 group sessions (2x a week for 8	Behavioural/activity based	Musical activities based on the protocol developed by Clair and Bernstein (1990)

	weeks). Session duration: 60 mins		
Svansdottir et al (2006)	18 group MT session (three times a week for 6 weeks). Session duration: 30mins	Not reported; song based	A selection of songs was chosen by the group and the RMT and each song played twice
Tuckett et al (2015)	24 group sessions (2 sessions per week for 12 weeks). Session duration 45-60 mins	Not reported - looks like activity based	Singing familiar old songs from memory; song to promote different parts of the body; musical quizzes (fill the gap, guess the lyric) reality orientation; instrument playing; good bye song (including participants names and something meaningful from the sessions)
Vink et al (2013)	34 group MT sessions (twice a week for 4 months). Session duration: 40 mins	Behavioural/activity based	Music selected, sung or played by the therapist (Dutch familiar songs, classical and folk music) and if possible, actively participated in music activities by singing, dancing or playing instruments.

3.2 Theoretical perspective and clinical methodology

As shown in table 3.2, many of the studies were categorized as activity-based as the focus appeared to be exclusively on behavioural changes (e.g. Chu et al, 2014). One exception was Ridder et al (2013) who reports a relational approach that focused on meeting the social and emotional needs of the individual through positive person work (Kitwood, 1997). Ridder et al (2013) grounds the theoretical basis in the concept of 'communicative musicality' (Malloch and Trevarthen, 2009) developed from studies in mother infant communication showing noticeable patterns of timing, vocal timbre and melodic gesture following typical rules of a musical performance (Mallach and Trevarthen, 2009). Ridder et al (2013) applies this theory in relation to people with severe dementia who, as a consequence of cognitive deficits, experience significant difficulties understanding language but communication can be facilitated through musical cues.

A number of studies also make reference to the physiological impact of sound. For example, Vink et al (2013) postulate that music may exert its effects on psychological symptoms and behaviours for participants with dementia by affecting physiological parameters, such as heart rate. In addressing symptoms such as agitation, Vink et al (2013) suggests that the RMT uses 'music parameters, such as tempo and mode, to activate or relax, and to stimulate social and emotional wellbeing or reduce anxiety in older patients with dementias' (p.1032).

Hsu et al (2015) reports an interactive clinical approach informed by affective neuroscience and this involved the RMT using their musical, vocal,

bodily and facial expressions (e.g. well known songs, improvisation, talking, facial and bodily expression) and an awareness of the stimulating, physiological properties of music. These elements made up the 'auditory and visual inputs' provided to the nursing home residents within their individual sessions (p.4) and highlights the importance of music in harnessing the cognitive resources of nursing home residents with dementia.

The function of the music differed across the studies and the clinical methodologies reported were categorized as following:

- 1) Therapeutic singing (*regulating arousal and establishing dialogue*)

Singing, either through the use of familiar songs or vocalising freely appeared as an important therapeutic component and was mentioned in the majority of the 22 studies. Ridder et al (2005) focused on singing well-known songs in order to build up structure and stability and/or as means of arousal regulation with her patient. Her detailed case study demonstrates how 'cuing' is a useful tool that the RMT can apply in working with people with attention deficits. In another study (Ridder et al, 2013) the clinicians involved were instructed to be aware of at least 3 different ways of applying music in therapy with people with dementia: a) catching attention and creating a safe setting b) regulating arousal level to a point where self-regulation is possible and c) engaging in social communication in order to fulfil psychosocial needs.

Although the importance of singing meaningful and familiar songs to the person with dementia is recognised, the RMT must still be able to work in the moment and change the music to meet the changing needs of the listener

(Ridder and Aldridge, 2005). This effort to share and maintain dialogue requires the skills of an attentive musician (Tuckett et al, 2015). Ridder and Aldridge (2005) write that to enhance communication and dialogue, the RMT uses therapy techniques, such as 'holding, containing, validation and empathy' to meet psychosocial needs; people are then invited to 'enter into dialogue in a reciprocal communication and with focus on remaining resources' (p.103).

2) A free improvisational approach (*affect attunement*)

Raglio et al (2010) makes reference to an active improvisational approach aiming to expand the expressive and relational non-verbal abilities of participants through free improvisation. Group improvisations used both rhythmical and melodic instruments and/or their voice freely to promote interaction using non-verbal behaviours. Raglio et al (2008) describes how 'through non-verbal behaviour and sound-music performances, the patient conveys his/her emotions and feelings, establishes an affect attunement with the RMT and is stimulated to modify the global emotional and affective status' (p.159).

3) Behavioural/Activity based (*performing gross and fine motor movement*)

In a number of group interventions, the Clair and Bernstein protocol (1990) was mentioned (Chu et al 2014; Kwak, 2013; Suzuki et al 2004). This protocol

involved musical activities with a particular focus on the use of rhythm and was developed in work with Alzheimer's patients in the late 1980s. The protocol includes gross and fine motor movement performed to music, rhythm playing along with music, music listening and singing with instrumental accompaniment. Often RMT facilitating the intervention collected data on participants' musical preferences and organised the intervention activities according to these data (Chu et al, 2014).

4) Song based (*to foster participation and prompt verbal discussion*)

There were a number of studies that used a song based approach (Brotons and Koger, 2000; Ashida, 2000; Svansdottir et al, 2006). Brotons and Koger (2000) used songs addressing topics (animals, flowers, seasons) to introduce and provide structure for subsequent verbal discussion and conversation in order to measure language functioning. Ashida (2000) sang songs around themes and topics of reminiscence (home, nature, hobbies, love songs). Svansdottir et al, (2006) used songs (chosen by the group) although the focus was not on reminiscing but to help manage behavioural and psychological symptoms. Sole et al (2014) reported that the music used in the sessions was chosen according to patients' expressed preferences (identified through initial evaluation) and other musical activities were used to foster participation including: songs that used participants' names; one main activity which varied according to participant responses; closing activity consisting of a goodbye song.

5) Psychotherapeutic (*involving verbal reflecting on role of music in evoking feelings and memories*)

One group study (Ahonen-Eerikainen et al, 2007) described the approach as 'humanistic psychotherapy'; the music allowed participants to work through negative feelings, provided empowering experiences and gave them joyful moments and helped build confidence and peer support amongst members. This study emphasized the underlying psychotherapeutic processes that take place in MT groups. In individual work, Schall et al (2015) describes how talking about feelings and memories triggered by listening or making music play an important role in building a therapeutic relationship with people with dementia living at home. In residential care, Hsu et al (2015) also reported that the relationship and talking, as similar to a psychotherapy session was a key construct.

Table 3.3 Methods and times of data collection, data analysis and findings of the included MT studies

Included studies	Method of Data collection and times	Data analysis	Findings
Ahonen-Eerikainen et al (2007)	1) The RMT kept notes after each session 2) Outside observers, (research team), also recorded behaviours and expressed emotions of participants 3) All sessions were videotaped	Qualitative data analysis were qualitatively analysed - coded and categorised according to grounded theory techniques	Three descriptive (hierarchical) categories based on the qualitative analysis of feelings and group therapeutic factors: 1) dealing with difficult feelings within the therapeutic music group process; 2) empowering experiences; 3) joyful moments. The role of the group was to bring safety, support, assurance, reassurance, positive feedback, validation and encouragement. The role of musical experiences helped with lack of confidence and make the group members feel good about themselves
Ashida (2000)	CSDD assessed at base line, end of weeks 2,3 and 4	ANOVA	Scores on CSDD showed significant difference between pretest and posttest 2 (baseline and treatment) as well as posttest 1 and posttest 2 (control and treatment) while no significant difference were found between

			pre and posttest 1 (baseline and control condition)
Brotons & Koger (2000)	Order of condition counter-balanced; participants were retested on the WAB at the end of each 2 week (4 session) interval	A two-way repeated measures ANOVA	Speech content and fluency as assessed by the spontaneous speech subscale of the WAB were better following MT than conversational sessions with a therapist
Brotons & Pickett Cooper (1996)	Care staff observations before during and for 20 minutes after session	Two-factor analysis of variance with repeated measures	MT had significant main effects on agitated behaviour – specifically pacing and crying (at least during the 20 minute post music MT observation period)
Brotons & Marti (2003)	Pre-test, day 10; follow up 2 months later	A Friedman 2 way analysis of variance test	No significant differences in the means obtained in the pretest, posttest 1 and posttest 2 for the Barthel Index. However, significant differences were found in the scores of the NPI, the dementia scale and CMAI
Chu (2014) & Lin (2011)	Cornell Scale for depression (CSDD); 4 assessments: 1) 1	Mean values of depression, salivary cortisol and cognitive	Significant difference in depression level (CSDD) between the MT and control groups from baseline (T1) to posttest (T3). No sig difference in CSDD scores from baseline to

	week before, 2) 6th session 3) 12th session 4) 1 month after	function at different time points using the Mann-Whitney U test and t test.	one month follow up (Chu, 2014). No difference in cortisol levels. Lin et al (2011) found after adjusting for time, group, and gender, results also showed a statistically significant decrease in agitation scores at 3 time point comparisons
Hsu et al (2015)	Neuropsychiatric Inventory NPI-NH and Dementia Care Mapping; Baseline; 3 months; 5 months; 7 months	Repeated measures ANOVA with the within- subjects factor 'Time' and between subjects factor 'Condition'	Preliminary outcomes indicated differences in symptoms and levels of wellbeing between the two groups, indicating that residents receiving MT improved. The greatest change between groups was found between baseline and month 7
Kwak et al (2013)	Behaviour Pathology in Alzheimer disease Rating scale (BEHAVE- AD); times not reported	Not reported	Agitation and disruptiveness decreased during MT and increased during standard care (no numerical data provided)
Kydd (2001)	Not reported	Not reported	Demonstrates the role MT can play in the difficult transition from home life to a long term care facility. Individual MT focusing on the

			resident's skills that are still intact is important for successful treatment.
Ledger & Baker (2007)	CMAI assessed prior to the intervention and then at 3, 6, 9 and 12 months.	A repeated measures multivariate analysis of variance	Significant effects on agitation within-participants over time, but not within-participant over time by group
Raglio et al (2010)	Baseline (T0) end of 3 cycles (T1) one month after last wash out (T2)	Mixed ANOVA. To analyse the changes over time referred to each NPI subscale in each of the two groups a MANOVA with post hoc contrasts was carried out	The analysis of single NPI items shows that delusions, agitation and apathy significantly improved in the experimental but not the control group. The post hoc analysis showed that the main improvements in the experimental group emerged the end of treatment (T1), with a maintenance of these results at the follow up (T2)
Raglio et al (2008)	Assessments at baseline, 8, 16 and 20 weeks	Mixed ANOVA	Overall global Neuropsychiatric Inventory (NPI) scores significantly reduced in experimental group at 8 th , 16 th and 20 th week
Raglio et al (2015)	Before and after study and follow up	Repeated measures ANOVA models with one	No significant impact: all groups (MT, LtM, SC) showed improvement over time in

		factor or an analogous nonparametric test.	behavioural symptoms, depression and quality of life
Ridder et al (2013)	CMAI assessed at baseline, week 7 and week 14	Matched paired T-test	Significant effect on scores on CMAI disruptiveness between MT and standard care. After sensitivity analysis remained significant
Ridder & Aldridge (2005)	Video recordings of all sessions, transcriptions of verbal, nonverbal, and musical responses, heart rate measurements during therapy and pre/post therapy, questionnaires on daily routines and agitation (CMAI)	An integration of mixed methods, e.g. a qualitative content analysis that integrates principles of Grounded Theory, and analysis of heart beat curves. The physiological and observation coding were brought together in a third level: interpretation of what happened.	A significant physiological change after a month with 20 sessions and a reduction in antipsychotic medication. Qualitative findings: it takes time to build up a therapy course with people with attention and concentration problems, and it takes time to establish communicative relationship - cuing techniques and careful regulative methods are important through the use of song

		This was supported by 5 expert RMTs carrying out micro analysis of video data and the "narratives" were analysed by means of hermeneutic analysis	
Schall et al (2015)	First 2 sessions followed by a later one	Time series analysis	Results based on aggregated time series data demonstrated statistically significant effects of the intervention on participants communication behaviour, their situational wellbeing, and their expression of positive emotions
Sole et al (2014)	GENCAT assessed at baseline and post intervention	Wilcoxon Signed Ranked Tests	There was no significant difference in quality of life scores (GENCAT scale) from pre to post-test
Suzuki et al (2004)	MMSE assessed pre-intervention (baseline) and 1	Paired t-test	MMSE did not significantly change, but scores of a sub-scale language improved significantly. MOSES scores for irritability

	week after the completion of intervention (2 months) by nurses from the dementia special care unit.		decreased significantly. Regarding changes in salivary chromogranin A (CgA) levels, the average was significantly decreased before session 16 compared to after this.
Svansdottir et al (2006)	BEHAVE-AD assessed at baseline, 6 weeks and 10 weeks (4 week follow up)	Wilcoxon signed rank test	After 6 weeks a significant decrease in symptoms rated as activity disturbances in the therapy group but not in the control group; reduction in sum of scores for activity disturbances, aggressiveness and anxiety; benefits disappeared 4 weeks after the last session
Tuckett et al (2015)	Interviews (20 to 44 minutes), were digitally recorded and later transcribed as a complementary data source for analysis	Qualitative Content Analysis (QCA)	Themes of 1) Temporality 2) effect (e.g. evoking memories), including the influence and/or the music as impacting the overall MT effect (the presence and personality of the therapist was thought to play an important and influential role 3) Policy - the care providers wanted the policy makers to know that music therapy is highly prized

Vink et al (2013)	Cohen Mansfield Agitation Index (CMAI) assessed at 4 time points: 1 hr before, then 1 hr, 2 hr and 4 hr after session.	Chi-square, independent sample t test and Whitney U test	After performing sensitivity analysis (intention to treat) the difference between the two groups attenuated. MT had no additional beneficial short term effect on reducing agitation when compared with general activities
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3.3 Methods of data collection

Table 3.3 shows that the included studies used a wide range of psychological outcome measures to make baseline, post study and follow up assessments on the behavioural and psychological symptoms of dementia. The main outcome measures included:

- 1) **The Cornell Scale for Depression in Dementia** (Ashida, 2000; Chu et al, 2014; Raglio et al, 2015)
- 2) **The Cohen-Mansfield Agitation Inventory** (Ledger and Baker, 2007; Ridder et al, 2013; Vink et al, 2013)
- 3) **The Neuropsychiatric Inventory** Raglio et al (2008) (Raglio et al, 2010).
- 4) **BEHAVE-AD: The Behavioural Pathology in Alzheimer's Disease Rating Scale** (Svansdottir, 2006; Kwak et al, 2013).

A number of studies suggested the effects of MT go beyond symptom reduction and attempts were made to quantify the positive psychosocial effects through video analysis. For example, Ridder et al, (2005) used a combination of data collection methods including video and heart rate to try to capture the more immediate and complex effects of individual MT. Also in a nursing home, Hsu et al (2015) collected scores on the Neuropsychiatric Inventory, Dementia Care mapping, and also video recorded the sessions to show staff how residents symptoms were reduced and remaining cognitive functions were activated during MT. Other data collection included MMSE scores and changes in salivary chromogranin levels of patients (Suzuki et al, 2004); tape recorded interviews of carer and staff focus groups (Tuckett et al,

2015); therapist process notes as well as video and session comments by observers (Ahonen-Eerikainen et al, 2007); and video and quality of life scales (Sole et al, 2014).

3.4 Data analysis

Quantitative analysis

The quantitative MT studies included in the review used a range of statistical models to analyse differences between the mean group scores. A number of parallel RCTs used mixed ANOVA (analysis of variance) with one repeated factor (time: three levels) and one independent factor (group: two levels) to evaluate changes in behavioural and psychological symptoms across time (Raglio et al, 2008; Raglio et al, 2010). Vink et al (2013) used mixed model analysis with repeated measures to analyse the differential effects of MT vs general activities on agitation. To analyse effects on symptoms and wellbeing, Hsu et al (2015) compared mean scores on the Neuro Psychiatric Inventory and Dementia Care Mapping scores over time as well as inferential statistics (repeated measures ANOVA). Ridder et al (2013) conducted an overall descriptive analysis where means and standard deviations were measured at each time point; and secondly, to analyse change in each condition they used inferential statistics (paired t test).

In investigating scores of depression, Chu et al (2014) analysed mean values of depression, salivary cortisol and cognitive function at different time points using the Mann-Whitney U test and t test. After adjusting for time, group and gender effects, they analysed differences in mean CSDD scores for time,

group, and time-group interaction in the experimental and control groups. The intention to treat principle was used to analyse data and missing data were handled with the last observation case brought forward.

Qualitative data analysis

A number of different approaches were employed to analyse the qualitative data collected. Ridder and Aldridge (2005) used micro analysis where quantitative heart beat measurements were integrated with a qualitative video data material and the narratives were analysed by means of hermeneutic analysis. Tuckett et al (2015) used qualitative content analysis (QCA) where codes were sorted into categories premised on how different codes are interrelated, with a view to generating these categories into meaningful clusters (themes). Ahonen-Eerikainen et al (2007) analysed video tapes, field notes of the therapist and the feeling wheels (analysed emotions) separately and each piece of data was coded into themes for content analysis according to an adapted grounded theory technique.

3.5 Key findings

Key quantitative findings

In one RCT, Chu et al (2014) found significant short term improvements in scores of depression after just 6 sessions of group MT over three weeks (effects were lost after a one month follow up). A number of other RCTs employed the Cohen Mansfield Agitation Inventory to investigate the effects

of MT on symptoms of agitation with mixed results. Kwak et al (2013) and Ridder et al (2013) reportedly found significant effect on scores of agitation compared to standard care. However, in a long term controlled study (Ledger and Baker, 2007) the researchers failed to find a significant difference between MT and standard care. Also, Vink et al (2013) used an active control and a sensitivity analysis and also failed to find significant treatment effect for agitation.

A number of RCTs reported a significant effect in reducing overall behavioural and psychological symptoms of dementia (BPSDs). In a study for patients with moderate to severe dementia, Svansdottir et al (2006) used the BEHAVE-AD scale and, in their analysis, found when three of the seven categories (activity disturbances, aggressiveness and anxiety) were put together, there was a significant short term reduction in symptoms in the therapy group but not in the control group. Raglio et al (2008) found that global neuropsychiatric inventory (NPI) scores significantly improved during improvisational MT but indicated that some symptoms were improved more than others. Improvements were more specific for delusions, agitation, anxiety, apathy, irritability, aberrant motor activity and night time behaviour disturbance. In a later study (Raglio et al, 2010) the authors found that only scores on delusions, agitation and apathy improved. This study also demonstrated that improvisational MT could be interrupted (for as much as one month) without effecting its short term efficacy for reducing symptoms.

Sole et al (2014) evaluated the effects of group MT on quality of life of older people with mild, moderate and severe dementia. They found negative results in that scores for quality of life decreased but this decrease was not

clinically meaningful. However, there were some dimensions of the quality of life that seemed to be affected positively by the MT relating to the social-emotional areas. This was supported by three sessions that were video recorded for post hoc analysis of facial affect and participation behaviours. Schall (2015) used 'time series analysis' and found significant effect on participant communication, wellbeing and expression of emotion in individual MT.

Key qualitative findings

In their content analysis, Tuckett et al (2015) identified three core themes: 1) 'temporality', that MT has a psychosomatic effect on participants; 2) 'effect' that is observed through facial expressions and positive mood/behaviour and this effect is not very long lasting and very much 'in the moment'; and 3) 'policy', MT is highly prized by staff and family members, and although they were unsure of its benefits they would hate to see it stop. The presence of the RMT was also deemed important to the group's success; namely their awareness and capacity to connect individually with residents, bringing a strong person-centred focus, different from a musical entertainer (Tuckett et al, 2015). Ahonen-Eerikainen et al (2007) found the therapeutic factors of group MT included 'dealing with difficult feelings', 'empowering experiences', and 'joyful moments'. Their study highlights the importance of psychotherapeutic processes that take place in MT groups. The findings also suggest the importance of the peer group of older people (outside the RMT) to support and encourage each other.

The individual case study by Kydd (2001) suggests MT can help build confidence and socialisation for an older person moving into long term residential care. Ridder and Aldridge (2005) found that a combination of data including heart rate and video data helped demonstrate the complexity of the individual MT process when working with a person with frontotemporal dementia. In particular, the measurements helped reveal the role of affect and regulation using therapeutic singing. Their case study demonstrates how singing songs with personal meaning make it possible to 'acknowledge the person's emotions, breaking the social isolation, and meeting the MT participant's psychosocial needs' (Ridder and Aldridge, 2005).

3.6 Quality of included MT studies

Each of the studies was categorized according to NICE levels of evidence (see appendix two for recommended grading scheme). There were 10 RCTs included in this review, categorized as the top level of evidence (A1); there were four well designed non randomised studies (level BIIa); four quasi experimental studies (level BIIb) and four non-experimental studies (BIII). Table 3.4 shows the hierarchy of evidence and grading system. It also shows whether the study was included in the most recent Cochrane review (Van der Steen et al., 2017). As can be seen in the table, only six of the included studies were also in the Cochrane review, with three awaiting assessment. The other RCTs included in the Cochrane review were excluded from this review as they did not meet our specific inclusion criteria (i.e. they were not delivered by a RMT).

Table 3.4 Grading evidence of included music therapy studies (adapted from Eccles and Mason, 2001)

Included studies	Level of evidence	Included in Cochrane review (Van der Steen et al., 2017)
Brotons & Koger 2000	AI	No
Chu et al (2014) & Lin et al (2011)	AI	Yes
Hsu et al (2015)	AI	Awaiting assessment
Kwak et al (2013)	AI	Awaiting assessment
Raglio et al (2010)	AI	Yes
Raglio et al (2015)	AI	Awaiting assessment
Ridder et al (2013)	AI	Yes
Sakamoto et al(2013)	AI	Yes
Svansdottir et al (2006)	AI	Yes
Vink et al (2013)	AI	Yes
Ashida (2000)	BIIa	No
Ledger & Baker (2007)	BIIa	No
Raglio et al (2008)	BIIa	No
Suzuki et al (2004)	BIIa	No
Brotons & Pickett Cooper (1996)	BIIb	No
Brotons & Marti (2003)	BIIb	No
Schall et al (2015)	BIIb	No
Sole et al (2014)	BIIb	No
Ahonen-Eerikainen et al (2007)	BIII	No
Kydd (2001)	BIII	No
Ridder & Aldridge (2005)	BIII	No
Tuckett et al (2015)	BIII	No

Risk of bias within included MT studies

The Cochrane ‘risk of bias’ tool (Higgins and Green, 2011) was used to appraise the quality of the RCTs and quasi experimental studies. Figures 3.1 shows the individual risk of bias summaries for each of the included studies

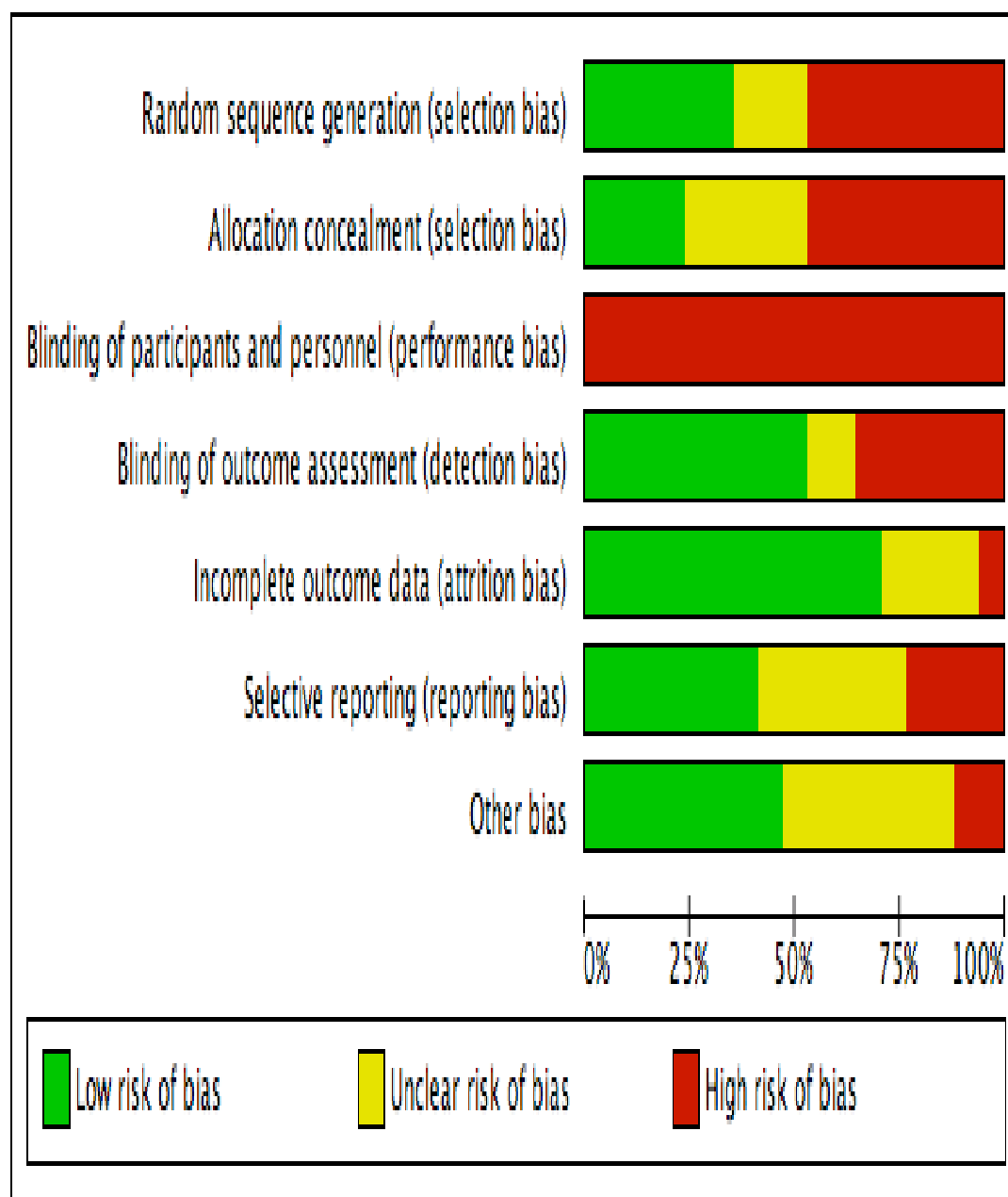
and whether they were judged high, low or unclear for each of the items. (Red = high risk of bias; yellow = unclear risk of bias; green = low risk of bias).

Figure 3.2 presents graphically the overall risk of bias across studies.

Figure 3.1 Risk of bias summary: review authors' judgements about each risk of bias item for each included study

	Random sequence generation (selection bias)	Allocation concealment (selection bias)	Blinding of participants and personnel (performance bias)	Blinding of outcome assessment (detection bias)	Incomplete outcome data (attrition bias)	Selective reporting (reporting bias)	Other bias
Ashida 2000	+	+	+	+	+	?	+
Brotons & Marti 2003	+	+	+	+	?	+	+
Brotons 2000	?	?	+	+	?	+	+
Brotons and Pickett-Cooper 1996	+	+	+	+	+	+	+
Chu et al 2014 & Lin et al 2011	+	+	+	?	+	?	+
Hsu et al 2015	+	+	+	+	+	+	+
Kwak et al 2013	?	?	+	?	?	?	?
Ledger and Baker 2007	+	+	+	+	+	+	?
Raglio et al 2008	+	+	+	+	+	+	?
Raglio et al 2010	+	?	+	+	+	?	+
Raglio et al 2015	+	+	+	+	+	+	+
Ridder et al 2013	+	+	+	+	+	+	?
Schall et al 2015	+	+	+	+	+	+	?
Sole et al 2014	+	+	+	+	+	+	+
Suzuki et al 2004	+	+	+	+	+	?	?
Svansdottir et al 2006	?	?	+	+	?	?	?
Vink et al 2013	+	?	+	+	+	+	+

Figure 3.2 Risk of bias graph: review authors' judgement about each risk of bias item presented as percentage across all included studies



Random sequence generation

Five of the included studies were judged low risk of bias for random sequence generation. Chu et al (2014) reported that participants were randomly assigned to either group using a permuted block randomisation using a computer program. Raglio et al (2010) and Raglio et al (2015) reported using a randomisation list and Ridder et al (2013) reported randomising immediately after baseline data collection, using a concealed sequence procedure. Hsu et al (2015) describes how residents were recruited from two care homes and randomised according to the unit they lived in within the home: randomisation was carried out between units (cluster randomisation) to reduce contamination across control and intervention groups.

Allocation Concealment

Allocation concealment requires that those responsible for recruiting people into a trial are unaware of the group to which the participant will be assigned before the participant is formally entered. Details of allocation concealment were scored low risk of bias for five of the included MT studies. Chu et al (2014) reported that they concealed the results in numbered and sealed envelopes. Hsu et al (2015) reported that random decimals were generated using Microsoft Excel to allocate the care home units to either the control or intervention group by an independent statistician. Raglio et al (2015) reported that each person with dementia was blindly associated to a sequential number according to a randomisation list. Researchers in the Ridder et al (2013) study gave the results of the random allocation directly to the RMT without involving

staff. Vink et al (2013) ensured random allocation by using sealed envelopes with at least two persons present.

Blinding

Blinding refers to the masking of treatments from the participant, the RMT, and the outcome assessors. In arts therapies interventions it is impossible to completely blind participants to the treatment, as blinding at this level can only be achieved in the absence of a therapeutic alliance. The consequence of this was that the risk of performance bias was judged high for all studies included in this review (as demonstrated in Figures 3.1 and 3.2). However, several studies (n=8) did successfully report blinding of outcome assessment and were judged as low risk. For example, Svansdottir et al (2006) reported that the nurses were trained in using BEHAVE-AD outcome measure and blinded to the therapy used; Raglio et al (2008) reported that 'scales were administered by a single physician blind to the patient membership in the control and experimental groups'; Ridder (2013) reported that interviews were carried out over the phone with a researcher who was blind to the treatment, asking the proxy respondent to rate the outcome measure (both the CMAI and ADRQL).

Incomplete outcome data (Attrition bias)

Attrition may occur because participants withdraw from the study, fail to attend an outcomes measurement session, do not complete all measurements tools, cannot be located (lost to follow-up), or data records are lost (Bradt et al, 2012). Attrition is an important factor in dementia research where progression

of the disease is an integral feature of the work. Eight studies were judged low risk of attrition. There was a low risk of bias for Chu et al (2014) who provided a detailed flow chart of participation at all levels of the study. Hsu et al (2015) provides detail that missing data was due to one participant from the standard care group being hospitalised before the seven-month data collection, and one participant from the MT group being absent during dementia care mapping (DCM) observations. Raglio et al (2008), Raglio et al (2010) and Raglio et al (2015) was judged low risk as in all three studies the drop outs were described and accounted for, and drop out distribution and reasons are provided. Ridder et al (2013) provides a detailed participant flow chart, analysed all available participants on an intention to treat basis and in addition they conducted a sensitivity analysis using 'last observation carried forward' where missing data points are replaced by last available value. Vink et al (2013) was also judged low risk as they provided a flow chart and reasons for attrition.

Selective reporting and other potential sources of bias

Chu et al (2014); Hsu et al (2015); Raglio et al (2015) and Ridder et al (2013) were all scored low risk of bias as all outcomes appear to be reported. However, the majority of the included RCTs failed to refer to study protocols or trial registration so have been judged unclear or high risk of bias. Other potential sources of bias could include the use of non-validated outcome measures. For example, it was unclear if the CODEM instrument used in the Schall et al (2015) study had been validated.

Trustworthiness of included qualitative MT studies

The quality rating score (A-D) for the included qualitative MT studies can be found in Table 3.5. Reasons are provided for the grade awarded based on the perceived credibility, transferability, dependability and confirmability of each study (see appendix 3 for full detailed appraisal of qualitative studies).

Table 3.5 Grading for trustworthiness of studies (adopted from Cooke et al.,2010)

Ahonen-Eerikainen et al (2007)	B (Some flaws, unlikely to affect the credibility, transferability, dependability and/or confirmability of the study)
Kydd (2001)	C/D (Significant flaws that are very likely to affect the credibility, transferability, dependability and/or confirmability)
Ridder & Aldridge (2005)	A/B (The study credibility, transferability, dependability and confirmability is high)
Tuckett et al (2015)	B (Some flaws, unlikely to affect the credibility, transferability, dependability and/or confirmability of the study)

From the included qualitative MT studies, Table 3.5 shows that the Ridder and Aldridge (2005) study was judged as being the highest quality; establishing trustworthiness through triangulation of data sources including attempts to integrate quantitative heart beat measurements and micro analysis of video recordings using qualitative hermeneutic analysis. Tuckett et al (2015) achieved transferability using direct quotes from participants to show how their themes developed. However, the study is limited to carer and family member

perspectives and therefore any attempt to include self-reports/member checking would have added to the credibility. Also in Ahonen-Eerikainen et al (2007) members lacked any self-rating report scales, which could have added to the overall trustworthiness. The Kydd (2001) study scored low on transferability, dependability and confirmability as there was limited detail regarding any systematic methods of data collection or analysis.

3.7 Chapter summary

This chapter has presented the findings from the included MT studies in the form of a descriptive narrative summary. Quantitative findings of this review indicate that there is high quality evidence that MT may have a short term impact on symptoms of depression and agitation for older adults with dementia in nursing homes. Qualitative findings show how MT can help regulate arousal, convey emotions through improvisation, support difficult feelings and meet psychosocial needs. Theoretically the studies make links to humanistic psychotherapy and affective neuroscience. Across the studies there is a focus on participants with advanced dementia in nursing homes, a lack of community-based studies and an absence of studies involving arts-based methodologies.

4 Results for dance movement therapy: a descriptive narrative summary

Chapter Overview

This chapter presents the findings from the DMT studies included in the systematic review. The data extracted is displayed in tables and summarised accordingly following PRISMA guidelines including study characteristics, theoretical perspectives and clinical methodologies, methods of data collection and analysis. Key findings are then presented in the form of a descriptive narrative summary. Each of the studies are categorised according to NICE levels of evidence and assessed for risk of bias and trustworthiness using a grading system.

The overall research question guiding the review was:

What is the evidence that MT and DMT improves health and wellbeing for older adults with dementia?

4.1 Study Characteristics

Participants, setting and study design

In total 34 participants were involved across the five DMT studies that survived the review scrutiny (see Table 4.1). The Wilkinson et al (1998) controlled study (N=16) had the largest sample with nine in the experimental and seven in the control group. The authors report that participants with dementia were selected from the day hospital if they 'had a reasonable level of communication abilities and mild to moderate cognitive impairment' (p.196). Nystrom and Lauritzen (2005) report 'convenience sampling' in recruiting seven persons from a nursing home for their qualitative study. In Coaten's (2009) quasi-experimental mixed methods study, participants were chosen on a session by session basis; there were four patients and five staff in the recorded session (the context of the study was a staff training program on a dementia care ward). Hill's (2006) phenomenological study was an individual case study also on a hospital ward. Kowarzik's (2006) observational evaluation was conducted in a care home and clients 'were selected on the basis of criteria' agreed with the therapist, for example, the clients needed to feel comfortable in a group situation and have some mobility (p.22).

Overall, there was lack of clarity regarding the type of dementia of the study participants. Hill (2006) uses the words 'Alzheimer's disease' and 'dementia' interchangeably (p.166). The level of dementia was reported to be varying (Nystrom and Lauritzen, 2005; Kowarzik, 2006) mild to moderate (Wilkinson et al, 1998), moderate (Hill, 2006) and moderate to severe (Coaten, 2009).

Table 4.1 Characteristics of included DMT studies

Author	Participants (Sample size; type and level of dementia)	Setting	Study design
Wilkinson et al (1998)	N=16; mild to moderate dementia	Day hospital in UK	Controlled study with mixed data
Coaten (2009)	N=4; moderate to severe dementia	Hospital ward in UK	Quasi experimental with mixed data
Nystrom & Lauritzen (2005)	N = 7 ; dementia of varying levels	Swedish nursing home	Qualitative observational study
Hill (2006)	N=1; moderate dementia (Alzheimer's disease)	Assessment ward in psychogeriatric hospital in Australia	Case study (phenomenological)
Kowarzik (2006)	N=6; dementia (varying levels)	Residential care home in UK	Observational evaluation

Type, frequency and duration of interventions

As Table 4.2 shows, the majority of the studies involved group interventions (4) and there was only one individual intervention (Hill, 2006). In two cases (Coaten, 2009 and Kowarzik, 2006) staff training was part of the intervention. Three studies reported the frequency of sessions and took place on a weekly basis (Wilkinson et al 1998; Nystrom and Lauritzen, 2005; Kowarzik, 2006). The longest interventions lasted for twelve sessions (Wilkinson et al, 1998 and Kowarzik, 2006). The data collection, transcription and analysis in Coaten's (2009) study uses only one session filmed on the ward (session 3 of 5). Hill (2006) is less clear in her reporting of session frequency and duration. It is reported that there were four sessions but the durations of the sessions and subsequent video viewings are not accurately described.

Table 4.2 Intervention, theoretical framework and clinical methodology of the included DMT studies

Included studies	Intervention type, frequency and duration	Theoretical perspective	Clinical methodology
Wilkinson et al (1998)	12 group sessions (weekly); session duration: 1 hr 45 min	Sesame method based on Jungian psychotherapy	A symbolic approach presenting opportunities for more organised self-expression through the use of metaphor; working through music and movement to develop and change
Coaten (2009)	Data used from one group session only; session duration not reported	Humanistic/existential; creative, person centred care	Increasing bodily awareness; working to celebrate remaining potential of participants as expressed through movement/dance
Nystrom & Lauritzen (2005)	10 group sessions (weekly); session duration not reported	Psychodynamic approach based in object-relation tradition	Unstructured and improvised; circle formation, mirroring, free dance movements, speech and singing in different combinations
Hill (2006)	4 individual sessions;	Person centred	Unstructured/improvised; working solely with what

	session frequency and duration not reported		occurred in the moment and a music therapist responding to the dance/movement interaction
Kowarzik (2006)	12 group sessions (weekly); session duration not reported	Person centred, informed by neuroscience.	Theme/activity based; set sequence to provide familiarity although a person centred approach ensured that individual needs were attended to. The use of props to encourage engagement and communication; use of touch as a way of connecting with clients and to enhance bodily awareness

4.2 Theoretical perspective and clinical methodology

As illustrated in Table 4.2, the majority of the included studies were informed by a humanistic, person centred framework (Hill, 2006; Kowarzik, 2006; Coaten, 2009) as well as elements of psychodynamic thinking concerning symbolism (Nystrom and Lauritzen, 2005) and metaphor (Wilkinson et al, 1998). Hill (2006) clearly situates DMT as part of person centred care, citing the work of Thomas Kitwood (1997), she describes an overall humanistic and holistic approach, valuing the presence and use of relationship to promote wellbeing and growth in others. Coaten's (2009) study also had a person-centred ethos, tailored to each participant and focused on maintaining their 'personhood' through supporting remaining individual capacities and increasing bodily awareness.

The Links Movement and Communication programme evaluated by Kowarzik (2006) was designed to stimulate the client's retained skills, and integrate the physical, psychological and spiritual aspects of the self. The therapist's theoretical perspective was reportedly informed by neuroscientific evidence supporting the expression of a 'changing self' that may experience loss and activating the body's capability to recover memory lodged in the musculature of the body (Kowarzik, 2006:19).

Nystrom and Lauritzen (2005) highlight the special conditions for communication offered in a DMT context and describe the importance of synchrony and symbolization. Synchrony refers to three aspects of body movement: space, rhythm and effort, whereas symbolization refers to the way the experiences of the individual, such as thoughts and emotions are mediated and transformed into body movements and bodily expressions

(p.300). They describe a psychodynamic approach theoretically based 'in an object-relation tradition in which human beings are understood to have a fundamental urge for communication' (p.299). The DMT context is described as being located somewhere between fantasy and reality (p.312) and the authors make links to psychodynamic theory such as the 'intermediate area' (Winnicott, 1971) where symbolization can occur.

Wilkinson et al (1998) describe a symbolic approach that presents opportunities for more organized self-expression through the use of metaphor that is informed by Jungian thinking. Their 'Sesame method' places emphasis on the creative and expressive use of the imagination within the safety and containment of art forms, and 'does not seek to work directly or literally' with personal material. The approach is therefore, considered 'non-confrontational and non-invasive' (p.196).

Clinical methodology

The included studies made reference to free improvisation (Hill, 2006) spontaneous bodily expression (Coaten, 2009), synchrony and symbolisation (Nystrom and Lauritzen, 2005) and the use of touch (Kowarzik, 2006) as some of the key therapeutic components. Marian Chace (Chaiklin and Schmais, 1986), a founder and pioneer of DMT, was mentioned in a number of the group studies. Techniques employed by Chace such as 'mirroring' (involving active interaction on the therapist's part, and being in touch or attuning to the experience of others in an emotional and embodied way) were mentioned in a number of studies; as was her use of a circle format to create a safe holding

environment (Coaten, 2009; Kowarzik, 2006; Nystrom and Lauritzen, 2005). In this format the group stands/sits in a circle, each person taking a turn to lead an improvised movement, which the rest of the group follows or mirrors.

Coaten (2009) reports that his sessions had three principle elements: an opening or warm up focusing on body awareness (stretching, shaking, tapping, twisting) followed by a development on a chosen theme, leading to wind down or closure. The movements used were familiar and ones that would have been used in everyday life (such as shaking hands). Memory recall was vital to the process and simulated through the use of a variety of stimuli: sensory, visual, auditory and kinaesthetic to help give the person back a sense of self identity.

Kowarzik (2006) reports that the use of props and touch was an important way of connecting with clients and increasing bodily awareness. Hill (2006) provides limited description except that the sessions were improvised, the RDMT working solely with what occurred in the moment. The sessions were also facilitated by a MT who offered improvised musical responses to the dance movement interaction.

Wilkinson et al (1998) focused on self-expression and metaphor to develop character work or a general theme. These were long session (1 hour 45 minutes) and each session consisted of a structured format within which there was the opportunity for valuable unstructured time and improvised drama and movement scenarios. A session plan is provided which includes: introduction/welcome group; focus; warm up; bridge (character or theme); main event (character or theme); grounding (de-role).

Table 4.3 Methods of data collection and times, data analysis and findings of the included DMT studies

Author	Method of data collection and times	Data analysis	Findings
Wilkinson et al (1998)	Range of quantitative outcome measures including MMSE; ADAS-cog; CSDD taken week prior to therapy and at the end of 12 weeks; observational field notes also recorded of the experimental group	QUAN: The Mann Whitney U test QUAL: Thematic analysis of observations	QUAN: No significant differences between the two groups either at initial or follow up assessments. Mean scores are presented on a range of scales including: ADAS-cog 21.1 (initial) 25.7 (follow up); MMSE 19.8 (initial) 17.6 (follow up); CSDD 2.9 (initial) 3.6 (follow up) QUAL: Positive effects of groups and improvements in daily life
Coaten (2009)	Session video recorded; a trained Dementia Care Mapper made detailed observations at 5 minute intervals	QUAL: thematic video analysis by author. QUAN: Comparison of aggregated scores from DCM	QUAL: Analysis of the video transcript yielded 33 linked themes leading to 5 further meta-themes. QUAN: Dementia Care Mapping aggregated scores indicated

			positive change on raising and supporting observed 'well-being' (1.4 pre to 1.9 post and sustained for 25 minutes following end of session)
Nystrom & Lauritzen (2005)	Each session was video recorded	Video transcribed to provide examples of verbal and non-verbal communication	The interpretations from the video observations infer that people with dementia use body movements to communicate thoughts and feelings symbolically
Hill (2006)	The sessions were video recorded. A few hours after the session client and therapist/researcher watched a video of the session, and this in turn was videotaped in order to capture any verbal or non-verbal feedback.	1) analysis of the movement material in session 2) verbal transcripts (the person's perspective through her words)	Finding suggest client moved from an inability to recognise herself on the video to a position of recognising herself and re-integrating the positive qualities that she saw; e.g, the client commented "I'm glad I'm strong"
Kowarzik (2006)	3 sessions were observed (1,6,12) by the researcher using an observational	Video analysis and independent cross referencing	The group provided an environment to rediscover skills of moving, singing and

	framework designed for the study. Video recordings of these 3 sessions allowed more detailed analysis	with a movement analyst	communicating with others: "enabled clients to express themselves and sometimes their feelings for others"
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Note. MMSE = Mini Mental State Examination; ADAS-cog = Alzheimer's Disease Assessment Scale – cognitive subscale;

CSDD = Cornell Scale for Depression in Dementia; DCM = Dementia Care Mapping

4.3 Methods of data collection

Table 4.3 shows that video was the most popular form of data collection, used in four out of the five studies (Nystrom and Lauritzen, 2005; Hill, 2006; Kowarzik, 2006; Coaten, 2009). Nystrom and Lauritzen (2005) collected video data to explore how verbal and non-verbal modes of communication were used by participants. Hill (2006) used video both to record the sessions and to facilitate the later viewing session that took place with client and therapist. Kowarzik (2006) designed her own observation tool and video recorded three different sessions to look closer at the interactions taking place. Coaten's (2009) data collection involved video recording a one-hour session combined with Dementia Care Mapping to provide quantitative data over time.

The only study not to involve video recording was Wilkinson et al (1998). The focus of this study was to investigate whether a drama and movement therapy group had any measurable impact on scores of cognition and depression, and to document positive experiences through field notes. The researchers made quantitative assessments on a selection of rating scales covering cognition, mood and activities of daily living, using a range of instruments including the Mini Mental State Examination (Folstein, Folstein and McHugh, 1975) and the Cornell Scale for Depression in Dementia (Alexopoulos et al 1988). The study also gathered qualitative data in the form of descriptive observations concerning participant experiences within and outside of the group.

4.4 Data analysis

A number of different approaches were employed to analyse video data. Nystrom & Lauritzen (2005) video-taped each of their ten sessions and analysed the data in two steps. First to capture participants' interaction with each other and with the therapist, all initiatives to interaction and responses to these initiatives, verbal as well as non-verbal, were identified. In the second step, the longer sequences of interaction that were identified were analysed with a focus on how verbal and non-verbal means of communication were used together to express or symbolize experiences, thoughts or feelings. The analysis revealed different ways this was done, here described as types of expressive mode (the article describes three types of expressive mode - speech dialogue, song-and-music dialogue and movement fantasy).

Hill (2006) reportedly video-taped all sessions and, a few hours after the session, the client and researcher watched a video of the session, and this in turn was videotaped in order to capture any verbal or non-verbal feedback. Hill (2006) reported two main methods of analysis. She used 'Laban Movement Analysis' to analyse the movement material in particular the 'significant moments' perceived to occur in each session. She also applied Giorgi's (1985) form of phenomenological analysis to the verbal transcripts (that is the patient's perspective in their own words).

Coaten (2009) video recorded one session and combined this data with quantitative scores using dementia care mapping. He analysed video through a phenomenological perspective enabling recognition of non-verbal embodied behaviours including movement patterns, gestures and postures as well as audible dialogue and music. The video of the session was transcribed to

identify themes. The themes were then analysed in two different ways: first in relation to being able to identify embodied practices from the patient and care staff perspective; second in relation to aspects of the session that could be generalized in the form of overarching meta-themes. The quantitative analysis involved comparing the aggregated wellbeing scores of participants on a group and individual level.

Kowarzik (2006) completed an observational framework and video recorded three sessions (the first, the sixth and twelfth) over a twelve-week period. She recorded observations of the group as a whole, the group dynamics and expressions of individual clients (for example, a vignette about a resident named Bert is provided in the text). The observational tool employed recorded the level of the client's engagement in activities, mobility, participation in songs, non-verbal and verbal communication, body posture and expression of moods. The video analysis of the three observed sessions allowed for cross-referencing between the researcher's observations made during the sessions and those of the movement analyst independently viewing the video material. Wilkinson et al (1998) analysed pre and post-test assessment scores using the Mann Whitney U test. Qualitative observations in the form of descriptive field notes were made although no observational protocol was reported as being used to record and analyse information.

4.5 Key findings

In the one controlled study (Wilkinson et al, 1998), no significant treatment effects were found between the two groups on all assessment measures. However, qualitative group observations included rich moments of contact

with members displaying strong coordination and concentration skills, and individual observations included 'empowering experiences' and 'rediscovering identity'. Kowarzik's (2006) observations suggest that DMT provided a context for fuller and more varied expression to emerge (moving, singing and communicating with others) and this helped create the conditions for positive social psychology as defined by Kitwood (1997).

Coaten's (2009) video analysis yielded 33 linked themes (e.g. physical mobility and exercise, rhythmic movement, use of dancing) leading to 5 further meta-themes: building relationships through embodied practices; providing opportunities for staff development and training; providing enjoyment and supporting well-being; supporting emotional communications; maintaining identity and personhood. The themes show how embodied practice can make a difference to the range and quality of communication and relationship with persons with dementia and care staff (Coaten, 2009). In addition, Dementia Care Mapping provided quantitative scores to indicate a positive change on raising and supporting observed wellbeing (1.4 pre-test to 1.9 post) sustained for 25 minutes following the end of the session.

Nystrom and Lauritzen (2005) findings suggest three expressive modes were used to facilitate communication within a DMT group. First of all, speech dialogues (where participant Erik compensates for lack of words with gestures and body movements); secondly, song and music (to stimulate participant's memories of song fragments particularly when the singing is accompanied by body movements and how singing and music seem to function as reminders of feelings and the uniting function of rhythm); and finally, movement fantasy, free body movement to communicate feelings and

thoughts. In the movement fantasy the dramaturgical role of the therapist seems to be important to structure and keep the communication going and to avoid a more chaotic pattern of communication. Wilkinson et al (1998) findings also suggest the importance of improvised drama and movement scenarios to help organize self-expression.

Hill's (2006) findings identified 'significant moments' characterized by 'heightened sensibility, expressiveness, aliveness, integration of body, mind and feeling and aesthetic quality' that could be rightly termed 'dance' (p.169). The case study provides the individual client's own words to help give a wider perspective on the experience as a whole. Watching the video offered a way for Hill and her client to reflect on the movement experience, which helped affirm the self in the moment, facilitating a 'process of growth and self-worth' (Hill, 2006:170). It would seem that through the DMT process and the opportunity to reflect on it together, Hill's client grew in self-esteem and confidence, connecting with the past and brought those positive feelings into the present. Hill's (2006) argument is that by focusing on the lived experience of her client she was able to maintain her sense of 'personhood' and identity. Kowarzik (2006) findings also suggest that DMT contributes to creating an ecology where individual personhood is respected.

4.6 Quality of included DMT studies

In the hierarchy of evidence (Sackett, 2000), RCTs are considered the top level of evidence, followed by controlled trials at an intermediate level, followed by case studies at a lower level. There were no RCTs included in this review. The Wilkinson et al (1998) study was categorized as intermediate level

of evidence (BIIa), being the only controlled study and the only one that utilized statistical testing. However, still, the study was judged to be of high risk of bias because selection for the experimental group was based on the practitioner's perception of those most likely to benefit (the control group were more cognitively impaired and functionally dependent than the drama therapy group). The remaining studies were categorized as being low level evidence (BIII). Coaten's (2009) quantitative findings were judged to be high risk of selection bias because of the lack of randomisation to a control group.

To assess the trustworthiness (credibility, transferability, dependability and confirmability) of the qualitative findings, an ABCD grading system was adopted (as used in Cooke et al, 2010). Using this grading system the overall quality of the studies varied from A (no, or few flaws) to D (significant flaws that are very likely to affect the credibility, transferability, dependability and/or confirmability of the study). As shown in Table 4.4, the Coaten (2009) study was judged as being of the highest quality; establishing trustworthiness through triangulation of data sources including dementia care mapping, staff interviews and combined with video and the researchers own analysis of meaning. The context of the research on the hospital ward was described and raw data (video transcripts and wellbeing scores) were provided. As a mixed method study the research scored highly for the noteworthiness of the problem and fit of the question to the mixed method design; the researcher drew on his own heightened sense of subjectivity to deepen understanding of the late stage dementia experience (see appendix 4 for detailed appraisal of qualitative DMT studies).

The Hill (2006) study scored highly on credibility as it involved an experienced practitioner focusing on what is meaningful for the person through member checking (missing from much of the literature). However, there was a lack of detail regarding methods, the movement material chosen and the use of 'Laban Movement Analysis'. A RMT was also involved in the study but their role was not clearly expanded upon. Nystrom and Lauritzen (2005) scored highly for their detailed description of the DMT context, use of video analysis, and providing examples of transcripts. However, much of the data (video) was lost when transcribing to text information.

Unlike the above studies that concerned practitioners researching their own practice, Kowarzik (2006) was an independent researcher evaluating the work of an experienced RDMT (Marion Violets-Gibson). The study also reported peer debriefing of the video with an independent analyst to make sense of the movement material. However, the study was marked down as no details are provided of the movement analyst's contribution. Also, the observational tool used had not been tested in the wider environment and more in depth research would be needed to validate the tool. Although a controlled study, the Wilkinson et al (1998) study was judged the least credible as there was a lack of clarity on who is making the qualitative observations and descriptions were only made from the experimental group. This study was also judged high risk of bias as there was no randomisation procedure and selection to the experimental group was based on including those considered most to benefit.

Table 4.4 Grading for trustworthiness of studies (adopted from Cooke et al (2010))

Coaten (2009) – qualitative findings	A/B (The study credibility, transferability, dependability and confirmability is high)
Hill (2006)	B (Some flaws, unlikely to affect the credibility, transferability, dependability and/or confirmability of the study)
Nystrom and Lauritzen (2005)	B (Some flaws, unlikely to affect the credibility, transferability, dependability and/or confirmability of the study)
Kowarzik (2006)	C (Some flaws that may affect the credibility, transferability, dependability and/or confirmability of the study)
Wilkinson et al (1998) – qualitative findings	C/D (Significant flaws that are very likely to affect the credibility, transferability, dependability and/or confirmability)

4.7 Chapter Summary

This chapter provides insights into the strengths and weaknesses of the existing evidence base for DMT in the treatment of dementia. Findings of this review indicate that DMT was well tolerated by participants and therapeutic components include increasing bodily awareness, spontaneity and improvisation, synchrony and the use of symbolism and metaphor to organise self-expression. Theoretically the studies make links to humanistic psychotherapy and elements of psychodynamic theory. Across the studies

there is a lack of detail regarding the lived experience of participants living in the community and an absence of arts-based methodologies.

5 Discussion of the review and the development of a treatment manual

Chapter Overview

The systematic review (presented in previous chapters) considered the quality of evidence for MT and DMT studies in improving the health and wellbeing for older adults with all types and stages of dementia. It also identified the theoretical perspectives and clinical methodologies utilised in existing studies and gaps in the literature. Quantitative evidence from MT supports a short-term reduction in symptoms of depression and agitation and qualitative findings from DMT highlight the importance of embodied communication to the therapeutic process. However, in both disciplines, there was a lack of community-based studies for people living with early to moderate stages of dementia and an absence of arts-based methodologies exploring participant experience. This chapter provides a discussion that refers back to the initial aims of the review and compares the key findings from both disciplines. The limitations of the review are considered, gaps in the literature highlighted and implications provided. Building on these findings an evidence-based treatment manual is developed, presented and discussed.

5.1 Discussion of findings

The findings from the MT and DMT studies have been presented in the form of a descriptive narrative summary in response to the research question:

What is the evidence that MT and DMT improve health and wellbeing for older adults with dementia?

This discussion will now revisit the initial aims that prompted this review.

- 1) *To investigate a broader range of quantitative and qualitative evidence including arts-based methodologies*

An aim of this review was to maximize research findings by incorporating a broad range of quantitative and qualitative evidence including arts-based methodologies. At present this review highlights that the evidence base for MT is largely concerned with participants at the later stages of dementia living in nursing homes. In these settings there was some high quality quantitative evidence that MT reduces short term symptoms of depression (Chu et al, 2014) and agitation (Ridder et al, 2013), as measured by the Cornell Scale for Depression in Dementia (Alexopoulos et al 1988) and the Cohen-Mansfield Agitation Inventory (Cohen-Mansfield, Marx and Rosenthal, 1989). However, the studies varied in their methodological quality and there was still no consensus on which standardised outcome measure best captured changes,

and whether that was even possible due to the progressive nature of dementia (McDermott et al, 2013)

Qualitative studies included a content analysis of data from focus groups of staff and family members that identified the temporal 'in the moment' effect of MT on residents (Tuckett et al, 2015). Ahonen-Eerikainen et al (2007) used a combination of narrative inquiry and grounded theory to explore the psychotherapeutic processes that take place in MT groups. Two individual case studies were also found (Kydd, 2001; Ridder and Aldridge, 2005) and findings highlighted how MT helps regulate arousal (Ridder and Aldridge, 2005) and can increase confidence in managing a transition to long term care (Kydd, 2001). The studies suggested that the presence of a RMT was integral to the success of the intervention, requiring a person-centred focus (Tuckett et al, 2015), and knowledge of therapeutic techniques (Ridder and Aldridge, 2005). The Ridder and Aldridge (2005) study was graded the highest quality for trustworthiness providing a theoretical framework, a clear clinical strategy and triangulation of data sources (incorporating both quantitative and qualitative data).

The absence of RCTs means that the present analysis cannot provide any information on the effectiveness of DMT; the one controlled trial (Wilkinson et al, 1998) found negative treatment effect and was judged to be of low quality. The study judged highest quality Coaten (2009) used mixed methods to show the value of embodied practice to enhance wellbeing through combining video analysis and dementia care mapping. Another high quality study (Hill, 2006) showed the importance of 'significant moments' in the therapeutic process characterized by 'heightened sensibility, expressiveness, aliveness,

integration of body, mind and feeling and aesthetic quality' (p.169). Interestingly, none of the studies included an arts-based methodology as part of their investigation. Although arts-based methods are growing as a movement (Leavy, 2015) they still remain unfamiliar to many researchers as a research approach. The majority of studies focused on outcomes and this could be the result of authors reluctant to deviate from recognised methods. However, as Edwards (2016) argues, the use of music-making or other creative arts processes could be considered compatible with arts therapies inquiry.

2) To identify the theoretical perspectives and clinical methodology of the interventions studied.

Theoretically, the review showed that both MT and DMT engage each individual beyond their symptom management, and worked to enhance a unique sense of personhood as described by Kitwood (1997). These findings support previous research by Burns (2009) highlighting that a person centred trend is prevalent across arts therapies with this clinical population. The reviewed research suggest DMT facilitates an environment where personhood can flourish through embodied interactions that promote sensory awareness of the body and emotional vitality as an important feature of the dementia experience (Hill, 2006; Coaten, 2009). In the context of DMT, the focus was on expressive movement as a tool to communicate and the literature aligned with elements of psychodynamic thinking: for example,

psychodynamic psychotherapy (Nystrom and Lauritzen, 2005) and humanistic psychotherapy (Wilkinson et al, 1998).

The MT studies varied in their clinical methodology with approaches ranging from behavioural activities (Chu et al, 2014), song-based (Ashida, 2000), improvisational (Raglio et al, 2008) and a model based on emotional arousal (Ridder et al, 2013; Hsu et al, 2015). There was also increasing scientific interest in the physiological power of music and its capacity to stimulate cognition and motor skills (Vink et al, 2013). It is interesting that the same emphasis on the physiological power of dance was not included in the DMT studies, where the focus remained on the use of movement as an expressive tool of communication.

Techniques in MT included cuing to regulate arousal with persons with advanced stage dementia (Ridder et al, 2013). This was based this on 'communicative musicality', a theoretical model developed from studies in interpersonal exchanges that occur between mothers and babies (Malloch and Trevarthen, 2009). Hsu et al (2015) also suggested that for nursing home residents with dementia, affective cues such as musical and bodily expressions can be used to trigger patients emotional and somatic reactions. Emotional regulation was put forward as an important theoretical model and a suggestion that the RMT may have an educational role within the context of a nursing home, providing knowledge and ideas to staff on the therapeutic use of music (Hsu et al, 2015). There were also efforts to implement MT and DMT as part of care staff training to facilitate communication and improve quality of life (Coaten, 2009; Sole et al, 2014; Clair, 2016).

- 3) *To focus on positive therapeutic outcomes of health and wellbeing (considering the experiences of people with dementia participating in these studies).*

The review could not locate any consensus on an outcome measure to capture therapeutic change, and perhaps, as McDermott et al (2013) argues, there is not one standard measure to use across different stages of dementia. In recent years there appears a move away from MT and DMT as a behavioural intervention to a more palliative approach focusing on maintaining comfort and well-being (Coaten, 2009; Ridder et al, 2013; Hsu et al, 2015). However, more accurate reporting and the mixing of research methods where different forms of data are collected could help gain more insight into the therapeutic process. For example, the inclusion criteria for the review involved arts-based methodologies; however, no such studies were found. As Hervey (2000) describes, perhaps the way RDMTs most regularly collect data is by embodying selected qualities of client movement. Given the creative nature of the disciplines and possible difficulties participants may have remembering and sharing their experiences verbally, including arts-based methods could provide additional insights into participants' experiences, and this should be considered in future research.

Overall the notable absence concerning the experience or voice of people with dementia participating in MT or DMT perhaps reflects the fact that the majority of studies involved nursing home residents with late stage dementia with severe memory deficits. In these situations, it could be difficult and arguably unethical to conduct interviews with people suffering from

memory loss. However, member checking is often an important element of qualitative research. The one phenomenological study that did attempt to incorporate a participant's experience was Hill (2006) who took time to review identified significant moments of video with her client. Hill's findings suggest that her client moved from an inability to recognise herself on the video to a position of recognising herself and re-integrating the positive qualities that she saw. There was only one community-based study (Ahonen-Eerikainen et al, 2007) and in future studies it is of vital importance to try and understand what is meaningful for the person with dementia at different stages of the illness and too often this is missing from the literature (Beard, 2012).

5.2 Limitations of the review

A major limitation of the review was the focus of the search strategy on medical and health databases. Instead a broader selection of journals and artistic databases could have been searched if more time was available. For example, sources such as book chapters, performances and electronic platforms where potential studies employing additional qualitative and arts-based methods might be located. The search of medical and health journals discovered a surprising number of RCTs located for MT, which was encouraging in terms of high level evidence. However, many of these studies focused on outcomes and neglected to detail the clinical strategy important for arts therapies evidence. A wider search strategy could have provided richer qualitative information concerning the context of the work, the therapeutic process and participant experience.

The limited time available also focused the review on MT and DMT and therefore excluded potential studies from the other two arts therapies (dramatherapy and art therapy). As allied disciplines it would be useful to know how clinical practice has developed with this client population including theoretical perspective. Often arts therapy practitioners may integrate theory and elements from these allied disciplines such as the diverse use of props, image-making and sensory play, which have been left unexplored (Waller, 2002; Burns, 2009). The rationale for focusing on MT and DMT was to explore how an active body-orientated approach (i.e. live music-making combined with expressive movement) could work to engage older adults with dementia. Nevertheless, the author acknowledges that a larger review including studies from dramatherapy and art therapy could help further increase the evidence base and understanding of the therapeutic process. This is particularly relevant since there remains no Cochrane review in dramatherapy, and the review in art therapy is limited to two studies.

5.3 Developing a treatment manual

In preparation for the second stage of the study, a treatment manual was developed for a combined MT and DMT group for older adults with dementia living in the community. The purpose of the manual was to provide guidance to the therapists regarding: theoretical underpinnings of the intervention, the therapeutic components from the two disciplines together, the general structure of each session, an ethically sound way of applying the intervention in a community location. Links were made to key findings from the systematic review including guiding theoretical principles as well as the

rationale for combining MT and DMT. As there were limited community-based studies in the review, the manual was also informed by wider literature from psychotherapy and arts and health.

5.3.1 The theoretical frame

It has been proposed that all arts therapies share a psychotherapeutic theoretical framing, which distinguishes them from other allied health professions, such as occupational therapy, or speech and language therapy (Colbert and Bent, 2018). Humanistic psychotherapies, for example client-centred therapy, highlight the relational climate created by the therapist's congruence, unconditional positive regard and empathy as the most important ingredients for success (Rogers, 1961). The humanistic approach is widely present within the field of arts therapies (Karkou and Sanderson, 2006), which recognise all persons as creative individual's, and value the use of relationship to promote growth and wellbeing.

Theoretically, the high quality studies found in the systematic review (e.g. Hill, 2006; Coaten, 2009; Ridder et al, 2013; Hsu et al, 2015) adopted a humanistic approach of 'person centred care' as described by Kitwood (1997), and Brooker (2006). 'Person centred care' helped identify basic human needs under threat in dementia including comfort, inclusion, attachment, identity and meaningful occupation and saw the key psychological task as the maintenance of 'personhood'. Kitwood (1997) also identified actions (that he termed positive person work) which enhance personhood and wellbeing including recognition, negotiation, collaboration, play, celebration, relaxation, validation, holding, and facilitation (p.90-91). Positive person work has a

powerful outlet in the arts therapies owing to the extra importance placed on non-verbal forms of expression and interaction (Aldridge, 2000; Newman-Bluestein and Hill, 2010).

The systematic review suggests that regulating arousal is an important therapeutic component (Ridder and Aldridge, 2005) and wider literature from affective neuroscience indicates that the most effective interventions in dementia care begin with careful consideration of a patient's level of arousal state where musical elements are matched to body movements, vocal sounds and facial expressions (Claire, 2016). The rationale is that when the person is engaged in bodily expression, remaining capacities come to the fore, enabling these to be enhanced collectively and then celebrated through the performative and interactive nature of the relationship (Coaten, 2009; Hsu et al, 2015). In this way, psychosocial needs are being met not by passively reducing symptoms but rather through interpersonal processes that occur between therapist and client (Ridder et al, 2013). There is an argument, therefore, that MT and DMT can connect and build relationships with people of all stages of dementia (Odell-Miller, 1997; Waller, 2002; Coaten, 2009; Hsu et al, 2015) and help regulate arousal, modify behaviour and lead to positive changes in emotions (Hill, 2006; Hsu et al, 2015). The following principles were used to underpin this study:

- Personhood is an important and holistic notion that involves both body and mind (Hill, 2006; Kowarzik, 2006; Coaten, 2009).
- The relationship takes a central role in promoting growth and wellbeing (Ridder and Aldridge, 2005; Coaten, 2009).

- Symptoms of dementia are understood as unmet psychosocial needs and therefore attempts to communicate these needs (Ridder et al, 2013; Hsu et al, 2015).

These principles were used flexibly in the intervention as a way of underpinning the work and supporting the selected trained therapists to deliver the intervention.

5.3.2 A collaborative approach

In their book 'Integrated Team Working', Twyford and Watson (2008) suggest that collaborative approaches are common amongst RMTs in the UK, although little has been written or published about the work. Hackett (2016) has since described how combined arts therapy projects have been developed within the National Health Service in England and provides examples how combined practice support improved outcomes for clients. Hackett (2016) notes that across all modalities in the arts therapies there are a wide range of techniques that can be utilised in clinical practice. He argues that although there are techniques and approaches specific to the different arts therapies there are also areas that can be adopted and adapted 'with broad appeal to clients and potential for generalised therapeutic benefit' (p.47). Colbert and Bent (2018) have also recently documented how the desire to work creatively across modalities in arts therapies can produce innovative interventions and new approaches to working with clients.

Working with older adults with dementia, there is an argument that the distinction between MT and DMT is not discrete (Karkou, 2012) and there is a fluidity and overlap between the disciplines, involving, apart from other areas of common ground, ways in which people with dementia express themselves through their bodies in dancing, singing or music-making. As person-centred allied disciplines it could therefore be argued that the combination of MT with DMT may enhance the expressive skills of the individual with dementia and create additional opportunities for the individual to function in a more integrated, cognitively, emotionally and bodily way (Hill, 2006; Kowarzik, 2006; Hsu et al, 2015).

The decision to combine disciplines was not dictated from the systematic review (as there were no group studies included in the review that combined modalities). However, in terms of clinical practice, there are a number of commonalities between the two disciplines, apparent in the systematic review, such as:

- Using musical cues and bodily expression to generate and regulate arousal (Ridder and Aldridge, 2005; Hill, 2006; Hsu et al, 2015).
- Working with non-verbal improvisation to express thoughts, memories and emotions (Raglio et al, 2008; Coaten, 2009)
- Using rhythm to help stimulate, engage and structure communication (Nystrom & Lauritzen, 2005; Chu et al, 2014).

Other non-verbal techniques such as mirroring, working with fragments, playing percussive instruments and embodied interaction such as meeting eye contact, height levels and hand holding are all documented in the reviewed studies (Kowarzik, 2006; Coaten, 2009; Raglio et al, 2008; Vink et al, 2013).

5.3.3 A combined MT and DMT group

Ledger and Baker (2007) report a preference for group work in addressing people with dementias unmet needs for interaction and belonging. The systematic review indicated that group members in both MT and DMT were encouraged to take part in active, embodied improvisations involving instruments or voice, creative movement or singing (Kowarzik, 2006; Raglio et al, 2008; McDermott et al, 2014). Qualitative findings suggest unique therapeutic factors of group MT/DMT include:

- Allowing participants to work through negative feelings (Ahonen-Eerikäinen et al, 2007).
- Providing joy, energy, excitement and peer support (Wilkinson et al, 1998).
- Rediscovering skills and morale building through empowering experiences of moving, singing and communicating with others (Nystrom and Lauritzen, 2005; Kowarzik, 2006).
- Celebrating remaining potential (Coaten, 2009).

Building on findings from the systematic review, Table 5.1 identifies therapeutic aims for a combined MT and DMT group and provides the suggested techniques to address in each session. The RMT and RDMT facilitating the group met before and after each session to reflect on verbal, movement and musical themes, and considered appropriate activities based on individual needs and developing group cohesion. The sessions start with participants sitting in a circle and each session aimed to include an introduction and warm up of the body through movement (20 mins); a creative improvisation (20 mins); and an ending and opportunity to reflect (20mins). The group facilitators both had clinical experience working with dementia and an awareness of the needs specific to this client group (for example, issues around mobility or memory loss and confusion).

Table 5.1 Aims and techniques of combined MT and DMT group based on findings from systematic review

Aims of combined MT/DMT group	Suggested technique
1) To create trusting relationship	<ul style="list-style-type: none"> - Providing ground rules about what will happen in the session, address anxieties and expectations - A greeting song to generate arousal and a sense of connection between individuals - Invitations to provide a movement, posture, gesture acknowledged by the group
2) To stimulate thinking, memory, imagination and creativity	<ul style="list-style-type: none"> - Warm up through movement to increase bodily awareness (e.g. group singing, clapping, shaking, pushing/pulling individually and with partners) - Rhythmic movement patterns - Favourite song/dance suggestions - To create own 'signature movements' developing movement profile - Using various props (e.g. stretch cloth/scarves/ribbons) in imaginative way

- Singing familiar songs/moving together to regulate emotional arousal
- 3) To provide morale building, positive social experience
 - Vocal sharing about music/movement experiences linked to associations, memories, images and feelings
 - Using props of different textures (e.g. balls/balloons) to locate members in the group and begin a web of connections
- 4) To provide opportunities for non-verbal interaction
 - Choosing between different instruments
 - Mirroring in movement/music
 - Turn-taking (passing instruments round)
 - Non-verbal improvisation (e.g. sharing and developing movements and sounds)
 - Playful movement games, leading/following activities

- Empathic improvisation reflecting participant's mood
- 5) To focus on the embodied experience as a means towards self-knowledge
 - Sharing a movement or piece of music with the group
 - Reflecting on importance of music/movement to identity
 - Invitation to members to share thoughts and feeling about their own movements/music as well as feelings evoked by movement/music of other group members

5.3.4 The frequency and duration of the group

Overall, the systematic review revealed that within nursing homes, there was no consensus about how much or how often MT or DMT interventions should take place and frequencies ranged from daily to once a week. For example, the participants in the Chu et al (2014) study received two 30 minute sessions per week for six weeks, and this had a short term impact in reducing depression for nursing home residents; Svansdottir (2006) provided three 30 minute sessions per week for six weeks and also found some short term impact on negative symptoms. Some authors suggested that, particularly with participants with advanced dementia, the length and duration of MT sessions should be flexible to their needs (Ridder et al, 2013). In the overall reporting it is not clear whether MT and DMT sessions were in the morning or afternoon, which is problematic and Tuckett et al (2015) writes that the timing of sessions during the routine of residential care remains a vexatious issue.

The lack of community-based studies evident in the review makes it difficult to predict the most appropriate frequency and duration. In the one community-based study (Ahonen-Eerikainen et al, 2007) twelve group sessions took place over four months, although the duration of the sessions was not reported. It is therefore useful to look to the wider field of arts and health for guidance on frequency and duration. Other social community art groups such as 'Singing for the Brain' (Montgomery-Smith et al, 2008) also generally take place weekly and last one hour and thirty minutes. These open groups (organized nationally) provide an opportunity for people with

dementia, carers and family members to come together through singing familiar songs to increase wellbeing, improving day to day functioning and reduce social exclusion. For example, the singing group in the Camic et al (2011) met weekly during late afternoon, over a period of ten weeks for 90 minutes including a break for refreshments.

For the second stage of this study, the proposed sessions were smaller, more focused psychotherapeutic groups made up of five to ten participants. The therapists were paid for one-hour contact time and the decision to offer ten weekly sessions was made on the basis of limited funding. (The Cochrane review of MT does not advise on session duration but their criteria for inclusion stipulates that a minimum of five separate sessions are required to assess the benefit of an intervention).

5.3.5 Selecting an outcome measure for the second stage

The UK Medical Research Council (Craig et al, 2008) provides guidelines for evaluating complex interventions and using their framework the proposed group is a phase one exploratory study. This is where initial hypothesis and propositions are formulated and explored in order to develop a future phase two study that would involve a control group and randomisation procedures. The main focus of the present study was qualitative in that it primarily aimed to understand how the therapy would work in a community context.

However, high quality RCTs identified in the review (i.e. Chu et al, 2014) indicated that improving mood would appear a prime therapeutic target and

a number of factors led to the decision to explore scores of depression as a meaningful outcome measure at this exploratory stage. These included:

- raised levels of depression reported by people with dementia (Woods, 2012)
- pharmacological treatment with anti-depressants has disappointing results (Bains et al, 2002)
- increasing evidence that music-based therapies can have a positive effect on depressive symptoms (van der Steen et al, 2017)

However, it is not clear if this outcome measure would be applicable to those living in the community. For example, in other community based studies, Camic et al (2011) reported that standardised measures appeared less successful in detecting change over a ten-week period. As this is relatively small scale study it is unlikely that it will yield any meaningful quantitative results, still, it was believed to be worth exploring as a phase one study.

5.3.6 Significant moments

Previous studies have also suggested that MT/DMT has an ‘in the moment’ effect that is short lived and questions have been raised on whether existing psychological assessments are sensitive enough to capture change in a progressive disease such as dementia (McDermott et al, 2013). Also, the notable absence concerning the experience or voice of people with dementia participating in MT or DMT perhaps reflects the fact that the majority of

studies involved nursing home residents with late stage dementia with severe memory deficits. Here there are ethical considerations in asking participants to reflect verbally on their experiences.

Many studies in the review highlighted the importance of significant moments to the therapeutic process (Hill, 2006; Coaten, 2009; Tuckett et al, 2015). For example, Hill's (2006) findings characterised significant moments as 'heightened sensibility, expressiveness, aliveness, integration of body, mind and feeling and aesthetic quality' that could be rightly termed 'dance'. Similarly, literature from MT such as Ridder and Aldridge (2005) describe significant moments of dialogue and musical interplay between therapist and client and Hsu et al (2015) used video presentation to highlight significant moments of individual MT sessions to care staff as part of their study. Videotape can be a useful mode of documenting practice, not just through spoken language, but the total context of communication (McNiff, 1998; Aldridge, 2005).

In future, the more accurate reporting and the mixing of research methods where different forms of data are collected could help gain more insight into the significant moments that occur in MT and DMT. For example, Hervey (2000) has also described how arts-based methodologies make use of therapists' unique observational skills and ability to use movement and musical information as a way of knowing (Hervey, 2000). Given the possible difficulties participants may have remembering and sharing their experiences verbally, combining methods could provide additional insights into participants' experiences.

5.4 Chapter summary

This chapter has discussed the key findings from the systematic review, acknowledged its limitations and built on the strength of the evidence to present a research-based treatment manual for the second stage. The lack of community-based studies identified a need to explore how a therapeutic intervention could be implemented in this context for older adults with dementia. The treatment manual shows how MT and DMT work to meet psychosocial needs and celebrate personhood using therapeutic components including regulating arousal, increasing bodily awareness and non-verbal improvisation. It has identified depression as a meaningful quantitative outcome and discussed the importance of significant moments and using qualitative methods (video and arts-based) to further explore the therapeutic process.

6 Methodology for Stage Two: A Community-Based Case Study

Chapter Overview

This chapter details the methodology of a community-based MT and DMT group for older adults with dementia. Qualitative evidence from the systematic review highlighted the importance of embodied communication to wellbeing and there was also high quality quantitative evidence supporting the short term reduction in symptoms of depression. However, there was a lack of community-based studies and for this stage a case study design was selected to describe how the intervention was implemented in a particular therapeutic setting. The case study adopted a mixed methods approach merging qualitative experiences (including an arts-based reflective tool) with a quantitative outcome measure. The methods of data collection and analysis are described as are the ethical considerations of conducting research with older people with dementia.

6.1 Introduction

The last chapter discussed findings from the systematic review and presented a treatment manual based on the available evidence for a collaborative MT and DMT group. Theoretically, both MT and DMT work to meet the psychosocial needs of older adults with dementia and create a context to celebrate personhood (Hill, 2006; Coaten, 2009; Ridder et al, 2013; Hsu et al,

2015). Therapeutic components across studies included regulating arousal, increasing bodily awareness and free improvisation. The high quality qualitative studies focused on embodied communication (Coaten, 2009) and significant moments (Hill, 2006) where the individual with dementia functions in a more integrated way. There was also evidence for the short-term reduction in symptoms of depression (Chu et al, 2014). The review also drew attention to the absence of community-based studies and arts-based methodologies and argued that in future studies it is of vital importance to try and understand what is meaningful for the person at different stages of the dementia illness, including those living in the community.

Research questions

The overarching research question for this stage of the study was:

What is the value of a particular community-based MT and DMT group for older adults with dementia?

To answer this question, this stage of the study addressed the following two sub-questions:

- *How did changes in participants' creative expression facilitate significant moments in the therapy process?*
- *Did a music therapy and dance movement therapy group improve participants' symptoms of depression?*

To examine both a novel approach (combining MT and DMT) and a unique context (a community centre in North West England), a case study design was selected to be the most effective way of describing how the therapy works and documenting the therapeutic process.

6.2 Ontological and Epistemological statement

The study used a mixed method approach that combined a range of research methods and data to generate the desired information (Bradt et al, 2013; Edwards, 2016). The underlying philosophy underpinning mixed methods research is one of pragmatism (Creswell, 2015). Pragmatism acknowledges that all research methods have both strengths and weakness and prioritises the research question using multiple approaches (Bradt et al, 2013; Creswell, 2015). The ontology of pragmatism sits between the two polar paradigms of positivism and constructivism (Bradt et al, 2013). A positivist paradigm assumes the existence of single reality independent of any observer, whereas, in a constructivist or interpretivist paradigm there is no objective reality to be discovered and instead meanings are constructed as people engage with the world they are interpreting (Bradt et al, 2013).

In healthcare, positivism is still the dominant paradigm and RCTs are still recognised as the gold standard in showing evidence of treatment effect and change (Higgins and Green, 2011). However, clinical research questions are complex and often require multiple approaches (Craig et al, 2008; Moore et al, 2015). As complex interventions, there is an argument that the numerous

phenomena occurring in arts therapies practice cannot be reduced to a quantitative effect and qualitative methods have undeniable benefit in gaining a deeper understanding of how the treatment works (Edwards, 2016). Epistemologically, a mixed method approach attempts to integrate sources of data that involve both personal experiences as well as observable numerical information. Both subjective and objective data are therefore combined because they are both seen as providing useful ways of understanding the same phenomenon, in this a case a combined MT/DMT intervention for older adults with dementia, but from different perspectives.

Furthermore, this study explores the use of a reflective tool as an additional arts-based method. The reflective tool aims to engage the unique skills of arts therapists by including their embodied, artistic and aesthetic ways of knowing that are inherent in the therapeutic process (Hervey, 2000). The different types of data collected relate to the two research sub-questions. Whether data from different paradigms can be integrated is still debated, but it is argued that triangulating different methodologies will enhance the breadth of a study and therefore provide a more comprehensive understanding of the overall research question exploring the value of MT and DMT for older adults with dementia living in the community.

6.3 Research design

Guidance from the MRC (Craig et al, 2008; Moore et al, 2015) suggests the first stage in the development and evaluation of complex interventions should explore initial hypothesis and propositions. The treatment manual detailed in

chapter 5 provided a description of how the intervention would be expected to work, drawing on evidence (and relevant principles and ideas) from the systematic review and relevant literature. The aim for this second stage was to explore how the intervention would work in a community context and help clarify causal assumptions in relation to implementation and the mechanisms through which it will bring about change (Craig et al, 2008; Moore et al, 2015).

Aldridge (2005) has shown how the case study can be a flexible design that relates to real life situations and can involve various forms of data. He highlights the suitability of the design for allowing a close analysis of the therapist-patient interaction and capturing the uniqueness of each therapeutic encounter, emphasizing the importance of bounding the case study in context. McNiff (1998) has also described the case study as an especially useful model for art therapy research as it fosters a close connection between researchers and the process of therapy.

This case study used a convergent mixed methods design (Creswell, 2015) where quantitative and qualitative data were collected concurrently, analysed separately and then merged to discuss how results produce a better understanding of the value of a combined MT/DMT group for older people with dementia living in the community. The qualitative data aimed to provide insight into identified significant moments in the therapeutic process and generate evidence how the intervention worked in a community setting; the quantitative evidence provides some preliminary data about treatment effect.

6.4 Sampling strategy

In this small scale study purposive sampling (Creswell, 2015) was used to select participants from the local community. Only older people (aged 65 and above) with a confirmed diagnosis of dementia were recruited to take part in the study. The inclusion criteria also specified that participants must be currently living in the community, have sufficient knowledge of English (to understand the participant information sheet), and adequate functional hearing and vision. Participants were excluded if they suffered from any physical or psychological conditions that made it difficult to access a group setting independently. For example, this could include frequent aggression, delusions or paranoia.

The majority of participants were identified and recruited through one local care organisation, who support vulnerable people to continue living at home. The research was also advertised with the wider Dementia Action Alliance network in North West England. The researcher also attended and left advertising leaflets (see appendix 5) at a number of 'dementia cafes' and social activity groups organised by the Alzheimer's Society. The 'dementia cafes' proved a useful meeting space as they were often the first point of call for people who had received a diagnosis and were looking what support was available within the community.

The researcher sought advice from local care organisations when designing the initial advertising leaflets (see appendix 5). There was concern over whether the leaflets should be advertised as 'dementia' research since some people with suspected dementia did not have a formal diagnosis and

might therefore be put off from attending. There was also some concern over the word 'therapy' and whether people would be more or less likely to attend due to the cultural connotations of the word amongst the older population. Ultimately, the focus of the research demanded a diagnosis of dementia and also the word 'therapy' was included to give a clear indication of what the group would involve. Further information was detailed in the participant information sheet (see appendix 6) and the consultee information sheet (see appendix 7). The latter of these provided a more comprehensive detailing of the study, whilst the former described what was involved in taking part in a clear and concise manner.

6.5 The RMT and RDMT facilitating the group

The arts therapists facilitating the group were registered with their professional organisations, and bound by their respective code of conduct. They both had experience working with an older client population. Before the sessions began, to familiarise the therapists with the treatment manual and theoretical framework, I conducted an experiential workshop. In the workshop I presented techniques (for example, regulating arousal, increasing bodily awareness, musical and movement-based improvisation) and the therapists were made aware of the relevant theoretical perspective underlining the study (i.e. a holistic notion of personhood involving body and mind; growth through relationship; understanding negative symptoms as unmet psychosocial needs).

The RMT was Nordoff-Robbins trained and registered with the Health and Care Professions Council and the British Association of Music Therapists. She was a confident improviser with a wide repertoire of songs familiar to the client group (e.g. 1940s and 1950s) and other musical material that was integrated into the sessions. She predominantly played the piano keyboard but also made use of other instruments including the guitar, accordion and percussion. The use of familiar songs is a typical feature of MT sessions, and the RMT led this part of the session. A 'Hello' song and 'Thank you' song soon became an established part of the sessions that everyone in the group supported, including the paid carer present.

The RDMT was registered with the UK Council for Psychotherapy and the Professional Association of Dance Movement Psychotherapy. Typically, the RDMT led the group in warm up activities, creating an awareness of the body, and made connections to feelings and sensations, promoting the body as an expressive tool. She also provided the tactile props used in the session including the balloons, balls and stretch cloth to be used in playful movement-based improvisation.

6.6 Qualitative Data collection

This study involved an integration of multiple forms of data and methods of enquiry to explore participant, therapist and researcher experiences of the community-based group.

6.6.1 The participants' experiences

From an ethical perspective, it was deemed questionable as to whether participants with dementia could self-report on their own experience. Instead, qualitative video data was deemed essential to capture significant moments in the therapeutic process. As non-verbal therapies, previous studies had shown the importance of video data to capture significant moments when participants expressed themselves with increased effort, confidence and vitality during DMT (Hill, 2006; Kowarzik, 2006, Coaten, 2009). Studies from MT also used video to document the moments when participants showed the capacity to be responsive and alive in musical interaction (Ridder and Aldridge, 2005; Hsu et al, 2015). To collect this data, video cameras were situated in the corner of the room, away from participants and positioned to be as least distracting as possible. Consent had been provided to use the video via a consultee declaration form (appendix 8) and a participant consent form (appendix 9).

6.6.2 The therapists' experiences

To gain further insight into the therapeutic process, an arts-based reflective tool (see appendix 12) was used to draw upon the internal experiences of the therapists. Hervey (2000) has described how arts-based methodologies offer researchers a form of inquiry that is aesthetically motivated and makes use of therapists' unique observational skills. RMTs and RDMTs are trained to work with movement and musical information as a unique way of knowing (Hervey, 2000), paying particular attention to the quality and feeling of the

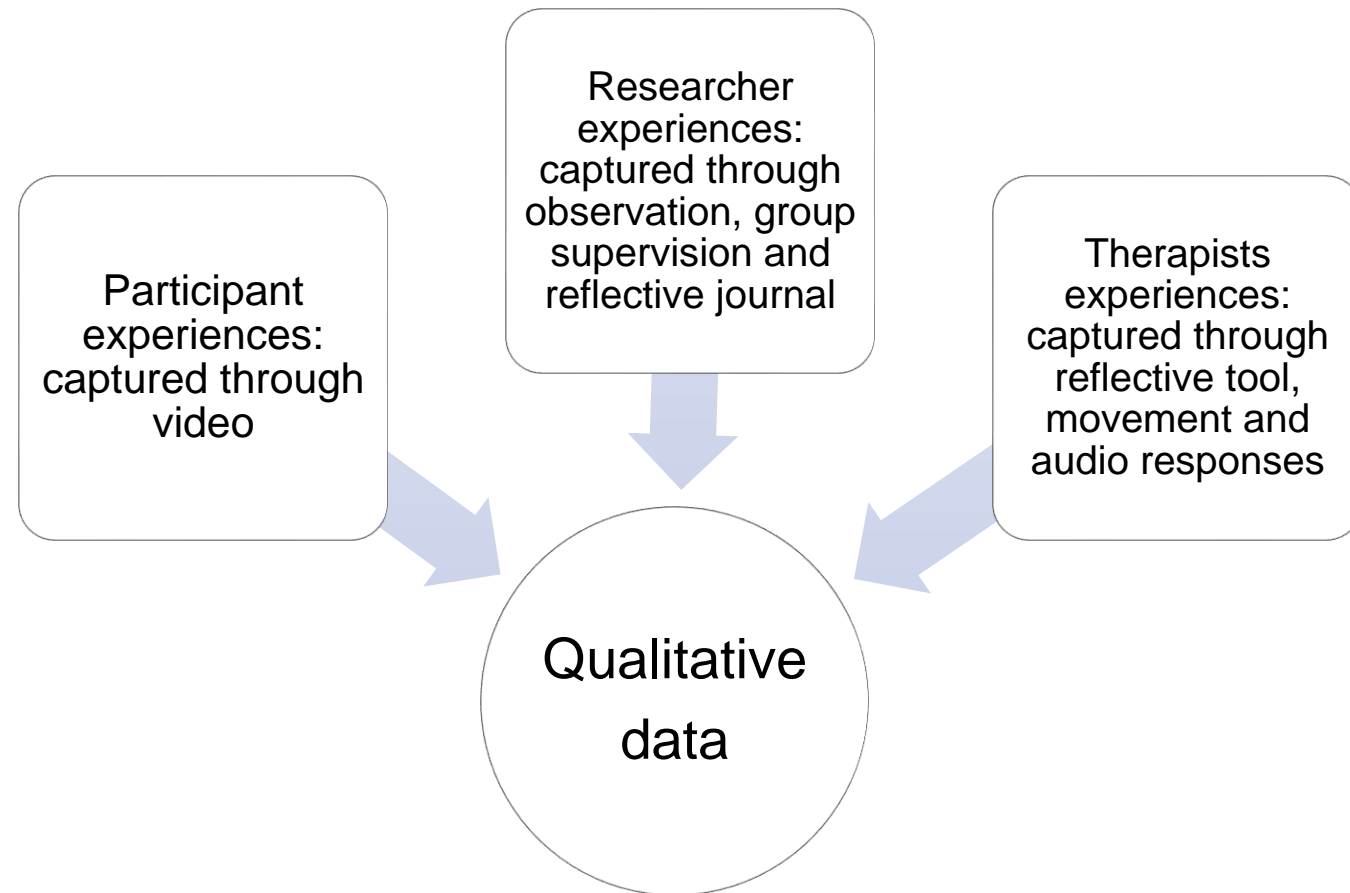
interaction. For example, the qualities that RDMTs appreciate are ‘reflected in the forms made by an expressive moving body’ (Hervey, 2000:73).

Directly after each session, the RMT and RDMT completed the reflective tool, identifying any changes in participants’ creative expression, providing both a written and embodied reflection. They were asked to draw on their immediate internal experience of what these moments felt like, and use music/movement to generate additional data (Hervey, 2000). This was informed by a belief that how therapists use their feelings is an essential tool in their work and using the arts can provide additional information about the experience (Edwards, 2016). This information was used as part of the analysis to facilitate coding the video.

6.6.3 The researcher’s experiences

This study also evaluated practice through personal reflection and clinical supervision. Supervision is a professionally required and essential part of ethical practice within the arts therapies. It presents an opportunity to explore ways of working with clients and reflect on the dynamics of the therapeutic relationship with the support of a qualified supervisor. In this study the therapists and the researcher together attended group supervision with an experience RDMT. The researcher also kept a reflective journal as a way of making experiences, thoughts and feelings visible and an acknowledged part of the research design, data generation, analysis, and interpretation process (Ortlipp, 2008). Figure 6.1 shows the different forms of qualitative data collected during the study.

Figure 6.1 Diagram showing qualitative data collection methods



6.7 Quantitative data collection

The Cornell Scale for Depression in Dementia (CSDD) (Alexopoulos et al, 1988), a combination of interview/observations with caregivers and participants is reportedly the most accurate way to screen for depression for people living with dementia. Using this scale, previous studies (e.g. Chu et al, 2014) found that MT can improve short term symptoms of depression for nursing home residents. However, for participants in the community, this posed many difficulties, not least because of a lack of certainty who the informant providing the outcome assessment would be. For some participants who had no family close by there was a reliance on paid home carers who often had busy schedules, often moving between several houses in one day. Therefore, another challenge of this study was to test a relevant outcome measure within a community setting.

The CSDD is designed as a screening tool and involves a joint interview with both the participant with dementia and an informant (see appendix 11). It details 19 questions concerned with symptoms and signs of depression occurring during the week prior to the interview. The questions are scored either absent (0), mild (1) or severe (2) and the scores are totalled at the end considering both the care givers and the participants' response to the questions. Due to the difficulties some participants with dementia may have remembering, the main focus of the interview is directed towards the caregiver about the participant's behaviour over the past week (and their answers are then checked with the participant). The reliability of the scale

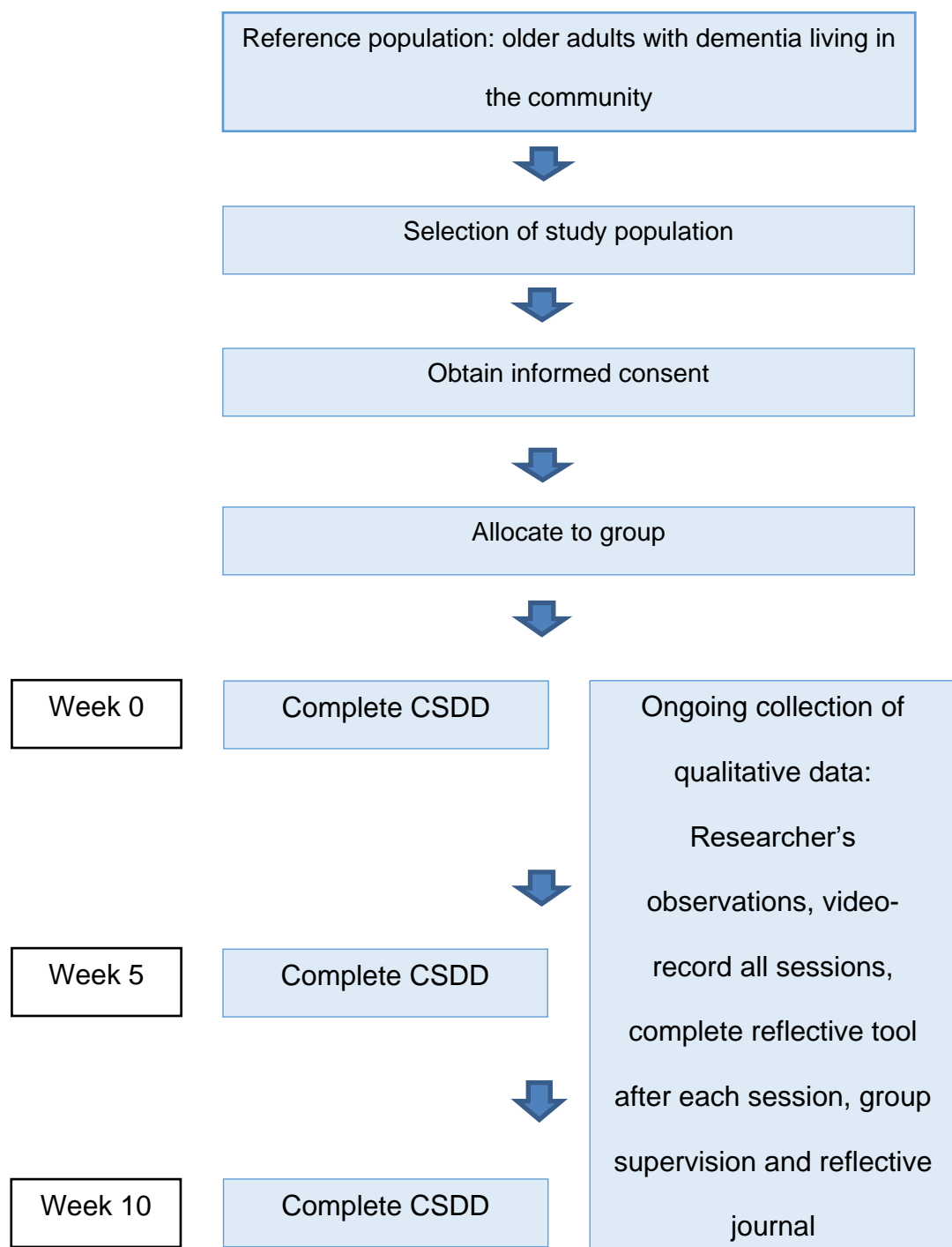
therefore is dependent on a caregiver who knows the participant well (to assess changes in behaviour) and has been in regular contact with the participant over the past week. The scale has high interrater reliability ($\kappa = 0.67$), internal consistency (coefficient alpha: 0.84), and sensitivity and is considered the gold standard for assessing symptoms of depression in dementia (see appendix 11).

For this study, informants (including paid carers and family members) were asked to complete the CSDD on three different time periods: week zero, week five and week ten (see Figure 6.2). Initial interviews with informants were offered after consent had been obtained at the earliest possible convenient date. Final interviews were arranged with the same informant after the study had ended. These scores were collected independently by the researcher with members of family or paid care givers at a location convenient to their schedule (i.e. office or house in the community).

For the families of two participants (recruited from dementia cafes) who had provided consent, the researcher made arrangements to travel to their house and complete the interview. In both cases it was decided that the participants and family members would like to complete the interview together in one sitting. For the participants, who had no family living close by, it was decided that a paid carer who attended their house on a regular basis should act as their informant for the study. For these interviews, the researcher was unable to meet the carers and the participants at the same time due to the shift patterns of the carers. Instead it was decided to carry out these interviews with only the carers at the organisations office when it

was possible for them to attend (the carers moved between different houses during the course of the day). For the purposes of the interview the carers were asked to reflect on how the participant had been during their last visit in terms of signs and symptoms of depression.

Figure 6.2 Data collection schedule



6.8 Analysis

6.8.1 Qualitative Analysis

Braun and Clarke (2006) advocate thematic analysis as a useful and flexible method for identifying, analysing and reporting patterns (themes) within data.

According to Braun and Clarke (2006) a theme captures 'something important about the data in relation to the research question, and represents some level of patterned response or meaning within the data set' (p.10).

Some of the choices that need to be included are: deciding what counts as a theme and whether themes are identified in inductive (bottom up) or theoretical and deductive way (top down) way. The qualitative analysis followed stages in Table 6.1 as adapted from Braun and Clarke (2006):

Table 6.1 Stages of thematic analysis (from Braun and Clarke, 2006)

Stage	Process
1	Becoming familiar with the data; viewing the video; considering therapists responses and personal reflections to identify significant moments
2	Coding the video for significant moments informed by therapist perceptions from the reflective tool
3	Clustering the significant moments into themes and subthemes

- 4 Reviewing themes with therapists and research team and generating thematic map; ascertain whether the themes 'work' in relation to the data set; code any additional data within themes that have been missed in earlier coding stages
- 5 Defining and naming themes (and sub-themes); identifying the essence of what each theme is about and determining what aspect of the data each theme captures; and how it fits into the overall 'story' in relation to the research question
- 6 Producing the report; telling the story of the data in a way which convinces the reader of the merit and validity of the analysis (including data extracts). Extracts need to be embedded with an analytic narrative that goes beyond description of the data and makes an argument in relation to the research question.

The analysis involved working through the therapists' perceptions, the video material as well as my own reflective journal and experiences in clinical supervision to 'form aggregated data units, first in codes, and then by collapsing the codes into themes' (Creswell, 2015:30). This writing process required a reflective period away from the research setting, but as close as possible to when the observation was done (Pope and Mays, 2006) and took place during the days and weeks after the first session. Initially, I began actively looking for patterns in the data relating to the research question:

How did changes in participants' creative expression facilitate significant moments in the therapy process?

This research question was influenced by qualitative findings from the systematic review that identified significant moments in MT and DMT where participants living with dementia function in a more integrated way. First of all, I considered the data collected from the reflective tool and watched the video recordings. This process was helpful as it allowed me to look closely at the therapists' identified significant moments in the context that they happened. I then began to code the video data informed by the therapists' perceptions. For example, the RMT identified that she felt there had been an overall change in Beverly's level of engagement, evident in how she tapped her feet in response to rhythmic songs. I then identified a number of instances of this on the video and this became an initial code: 'connecting to musicality'.

The next stage of the analysis used these initial codes to search for broader themes, focusing on what was relevant to the research question:

What is the value of a particular MT and DMT group to older people with dementia living in the community?

Rereading notes from my reflective journal and considering experiences in group supervision, I began to write ideas and interesting features of the data systematically across the entire data set. Following Braun and Clarke's

(2006) analysis phases I then began to collate the codes into potential themes, gathering data relevant to each potential sub theme, before generating a thematic map. (Appendix 15 shows an example of an early thematic map and appendix 16 shows the final thematic map). A report was then written to tell the story of the data. Examples of extracts describing the significance of these themes to my research question are drawn from video data, insights from the therapists via the reflective tool, experiences during clinical supervision and observations recorded in my own reflective journal.

6.8.2 Quantitative Analysis

The small sample size and assumed lack of normal distribution meant that quantitative data collected were analysed with a non-parametric test (The Wilcoxon signed-rank test). Participants who received less than three sessions were excluded from the analysis.

6.9 Trustworthiness and risk of bias

The qualitative data aimed to provide an in-depth account of the therapeutic process. To establish personal integrity, my own background (as a RMT) was presented early in the study and the advantages and biases of this discussed. Through frequent debriefing sessions my vision was expanded through discovering the experiences and perceptions of others. The therapists (acting as informants for the qualitative data collection) helped provide insight into participant experience and what felt meaningful as well as my own observations. The therapists were also asked to challenge my

own emerging interpretations (including checking early versions of my thematic map). Peer scrutiny was also welcomed through regular contact with practicing RDMTs, helping the researcher strengthen his argument to the importance of the bodily experience.

Qualitative research demands increased self-awareness on behalf of the researcher and this was maintained through writing a reflective dairy to help monitor my own impressions. In addition, clinical supervision was vital in providing a supportive environment to evaluate the therapeutic process and generate additional arts-based information. Working with sound and movement metaphors provided another level of insight into what dementia might mean for individual participants, whose sense of self may be fragmenting and disappearing. Imagery and symbolism were useful tools to enable safe engagement with difficult issues.

The final analysis involved the triangulation of several methods (video, therapists' perception, researcher's observations, group supervision) to generate the themes. Examples of these data are included in the overall thematic analysis providing an audit trail. Dependability and confirmability are also achieved through describing choices made during the research process. The setting and context of the research is described for the reader to help achieve transferability of findings. Direct quotes are incorporated from participants as well as excerpts from therapists' process notes and photo stills used to highlight significant moments.

6.10 Ethical considerations

The project gained favourable opinion from an NHS ethical committee (see appendix 14). The Mental Capacity Act (2005) enshrines the ethical principle that any person, regardless of cognitive capabilities, should be helped as far as possible to be involved in the decision to participate in research. The consent procedure in place for this study aimed to offer the best opportunity for the person with dementia to understand what is involved, to make an initial decision whether they wish to take part and to continue to make choices regarding their involvement.

The first stage of consent involved providing the local care organisation and relevant family members (or others appropriate) with information about the study in the form of a leaflet (consultee information sheet – see appendix 7). This initial point of contact also provided an opportunity to consult family and healthcare team for their judgement regarding an individual's capacity to consent. However, their approval of the project was not taken as final at this stage.

The second stage was to approach the person with dementia (when possible) and explaining, with the help of a specially designed leaflet, whether they would be interested in participating. When cognitive impairment/memory issues affected decision making, the family and health care team were consulted for their judgement to determine whether a potential participant could provide consent. If it was deemed that they were unable to provide consent due to cognitive impairment, the researcher provided a consultee declaration form (see appendix 8) for them to sign if they desired the participant to be involved in the study (i.e. they felt it was in

their best interests). Then only with family and health care team approval and consent was the participant included in the study.

The third stage involved continuing consent whereby staff and family members continued to remind the person about the project, and check if they are still willing to be involved. Obtaining consent was seen as an ongoing process, not a one-off event and each participant had the right to change their minds and withdraw consent at any time. If the researcher doubted the person participating in research still consented to participating he clarified this with the person in question. If they lacked capacity to make decisions, he clarified with family members and health care team. This consent process aimed to balance the needs of the person with dementia to be central to the process with the needs of relatives and healthcare team for information and involvement. It was adopted from other similar research studies addressing ethical issues of informed consent and participants with dementia (Allan, 2001; Coaten, 2009).

A further issue was the video recording that was essential to the qualitative strand of the study; enabling the researcher to identify changes in each participant's creative expression. As difficulty in verbal communication is a common symptom of dementia the study aimed to utilise the arts as a more accessible form of data to provide insight into participant experience. Participants and their consultees were requested to provide consent for video recordings (see appendix 8 and 9). The researcher was responsible for video recording the sessions and he alone had access to recordings. The video material is treated as confidential and will not be used in any public capacity. Additional consent was requested to use video/stills in the

dissemination of findings. However, this was optional and not a requirement to participation.

The NHS Code of Confidentiality was adhered to throughout the project and any sensitive information gathered over the course of the therapy was kept private. The psychological assessments involved scoring on an interview with a participant's informant. All personal details were kept only for the duration of the study (to enable contacting) and were destroyed immediately after the project was finished. All data gathered was stored electronically on an encrypted flash drive. Only the consent forms were printed off and stored securely at the university in a locked filing cupboard. The chief investigator alone had access to participants' personal data. The data will be kept for 10 years as recommended by the university's data management guidelines. After this time, all raw data will be destroyed.

The intervention followed a treatment manual developed from my systematic review, considering available evidence, and striving towards best practice. The risks were likely to be minimal and no more than those arising in everyday social interaction. The therapists facilitating the intervention were experienced in working with this client group, registered with their professional organisations and bound by a code of conduct. The researcher observed attendance, attrition and adverse reaction as part of the evaluation. Participants did not receive any payments, reimbursements or any other benefits or incentives for taking part in this research. With permission from the participant/family members, the researcher informed the participants General Practitioner (and/or any other health or care

professional responsible for their care) that they were taking part in the study.

The study is registered on the ClinicalTrials.gov website (NCT03404050) and results will be made available to participants, family members, carers and wider public through presentations and publications.

6.11 Chapter summary

This chapter has presented the methodology for the second stage, adopting a pragmatic view that multiple ways of knowing are necessary to establish the value of a community-based MT and DMT group. A convergent mixed methods design was selected to generate evidence regarding the therapeutic process and also test the applicability of a relevant outcome measure for use in the community. As a case study it aimed to provide a close observation of what happened in the session in terms of the participant-therapist interaction, and context of the work. The methods of data collection and analysis are presented, as are the strategies employed to ensure trustworthiness. The ethical considerations of the research have also been discussed.

7 Description of the sessions, qualitative and quantitative results

Chapter Overview

This chapter presents a descriptive account of the beginning, middle and end of the participant-therapist sessions. It provides a close observation of what happened in terms of process, how the participants responded, and how the participant-therapist and therapist-therapist interaction developed over the sessions. A qualitative analysis describes the emerging themes, and photo stills are provided to visually document the identified significant moments. Quantitative findings are also presented to provide preliminary outcome data. To help ensure confidentiality, pseudonyms have been used to report findings.

7.1 The setting and participants

Two groups were facilitated between June and September 2017. The first group ran for five weeks, there was a five week break, and then the second group ran for five weeks. The sessions took place at 2-3pm on Tuesday afternoons in a community centre in the North West of England. The setting was chosen to provide a safe and accessible space, free from interference, and there was also an onsite café for carers and family members if they

chose to wait. The particular room was familiar to some though not all of the participants.

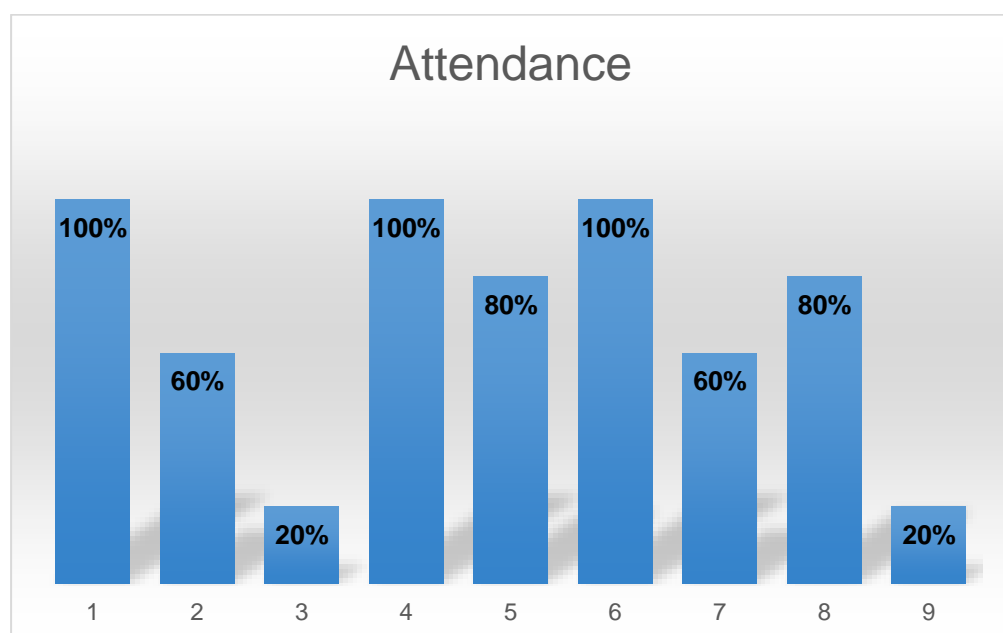
For the first group, consent was obtained for seven individuals (though one of these participants was unable to commit to the specified dates). These participants then carried out the baseline assessments using the Cornell Scale for Depression in Dementia (CSDD). Recruitment then continued to try and obtain more participants. Two new participants joined the second group, however their late enrolment in the study meant that they did not complete the CSDD. In total there were nine participants involved in the study. Table 7.1 shows the characteristics of the participants recruited including the age, diagnosis and how many sessions they attended.

Table 7.1 Characteristics of participants and sessions attended

Participant (pseudonyms)	Age	Gender	Dementia diagnosis	Sessions attended group one	Sessions attended group two	Total sessions attended of those offered
1 Mary	85	Female	Alzheimer's	5	/	5 (100%)
2 James	88	Male	Vascular	3	/	3 (60%)
3 Irene	74	Female	Alzheimer's	1	/	1 (20%)
4 Joyce	82	Female	Vascular	5	5	10 (100%)
5 Rita	84	Female	Dementias (not specified)	4	4	8 (80%)
6 Raymond	86	Male	Vascular	5	/	5 (100%)
7 Beverly	74	Female	Vascular	3	3	6 (60%)
8 Frank	85	Male	Alzheimer's	/	4	4 (80%)
9 Shirley	Not Known	Female	Uncertain	/	1	1 (20%)

Table 7.1 shows that the participants ages ranged from 74 to 88, there were more females than males, and vascular dementia was the most common dementia diagnosis. How many sessions each participant attended varied: some participants were offered 5 sessions, others 10, depending at which point they were enrolled in the study. There were factors that prevented some participants attending the first group and not the second. For example, Mary (participant 1) attended all of the sessions in the first group, however, she was not able to commit to later dates so was excluded from the second group. Similarly, Raymond (participant 6) attended all the sessions for the first group but did not attend the second group, partly due to having a fall and increased difficulties in his mobility. The bar chart in Figure 7.1 shows the percentage of attendance of the eligible participants.

Figure 7.1 Graph showing participants overall attendance



As can be seen in Figure 7.1, the majority of participants attended all (or nearly all) of the sessions that they were offered. Reasons for absences were due to falls (2 members); hospitalization (1 member) or else visits from family members. There was also one participant who dropped out after the first session of group one (Irene) and one participant who dropped out after the first session of group two (Shirley). Interestingly, both these participants were able to give their own consent and generally more independent than others in the group (for example, able to make their own way to the community centre). Unfortunately, I was unable to meet with these participants to check the factors affecting their decision not to continue. The participants with the highest attendance across both groups were Joyce (10) and Rita (8).

The ethical application had specified the need to consider both those with and without capacity to consent and the consent procedure had been discussed with the local organization involved with recruitment. Although some participants were able to provide their own consent, in the majority of cases a consultee (for example a husband, wife, son, daughter or carer) was needed. I was able to meet and go through the consent process with those recruited from the dementia cafes. In these cases, I exchanged emails with family members or spoke on the phone to arrange a suitable time to meet, explained the project, and left the consent forms for them to consider. After signing the consent forms I made arrangements to carry out the joint interview necessary for the CSDD.

The participants recruited through the organization all provided signed copies of the participant and consultee consent forms (see appendix 8 and

9). There was one participant who was deemed to have capacity consent and therefore only signed the participant consent form. Due to client confidentiality and because sometimes the informants (family members) signing the consent form lived far from area, this was arranged independently by the care organization. Although this was not an ideal scenario, I made efforts where possible to find out as much as possible from the care organization about the participants before the first session.

7.2 Description of sessions

7.2.1 Opening of group one

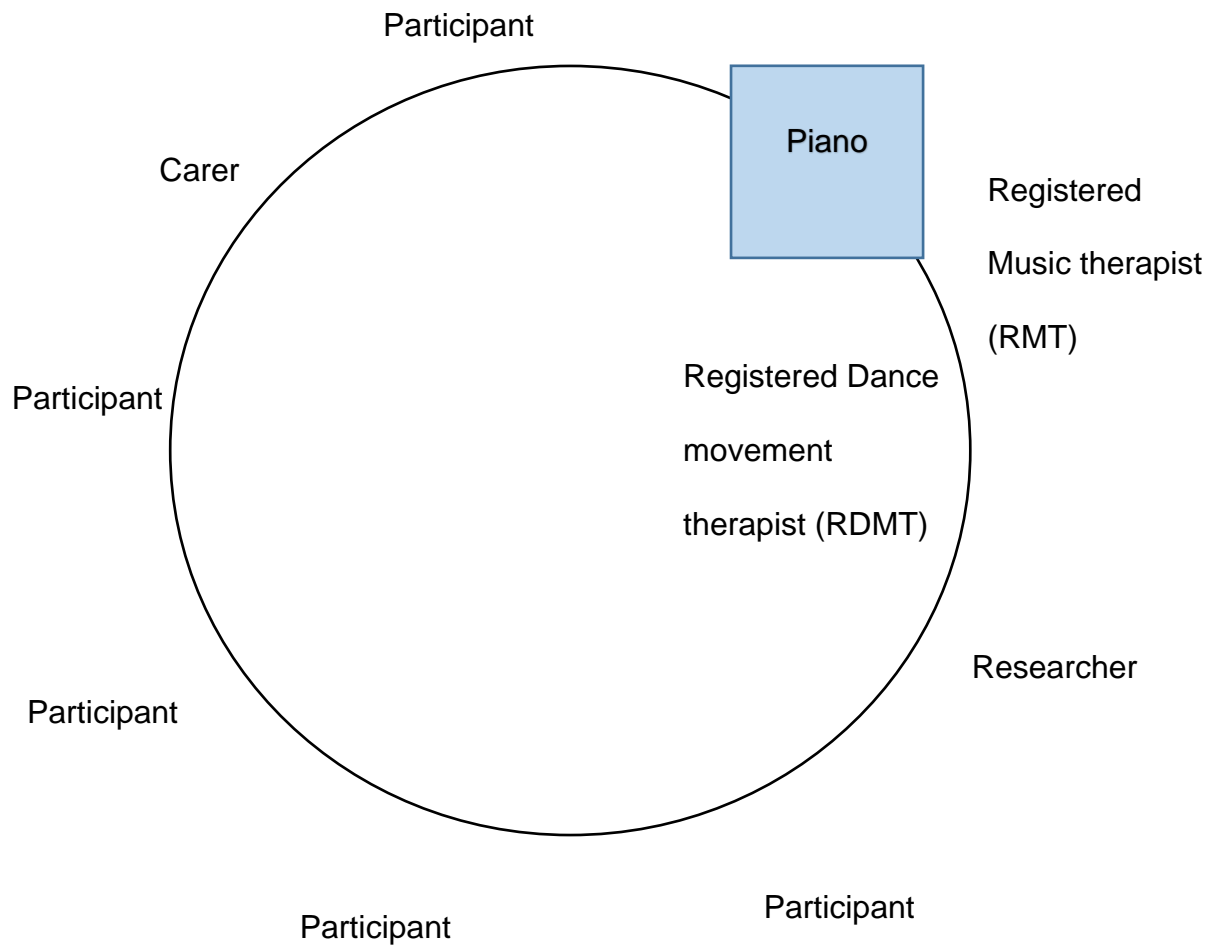
The care organisation collected Rita, Joyce, James and Irene from their homes and provided transport to the community centre for all of the sessions. As this organisation visited each of these participants in their home (at least a couple of times per week) they were also able to monitor each participant's health situation and advise whether they would be able to attend the group. The other participants arrived with family members: Mary's daughter brought her to the group, Raymond also arrived with his daughter, and Beverly arrived with her husband. The paid carer from the organisation stayed within the group, and the various family members went to the café or else off-site.

Inside the room, the chairs were always positioned in a circle and upon entering the community centre, the participants would be guided to their seat by their carer, myself or one of the therapists. The therapists

presented a name badge to each participant and then provided an opening statement about the purpose of the group, how long it would run for, and what was expected. Participants were encouraged to do as much or little as they wanted and told that there was no right or wrong way to participate. They were also informed that this would be a confidential space should anyone choose to disclose feelings and anxieties.

Some of the participants then began to introduce themselves to the group, and it was noticeable that some other participants struggled to express themselves verbally. The participants were invited to choose different percussive instruments while the RMT played familiar songs at the keyboard and some participants joined in singing or playing. The main improvisation involved passing round a balloon and then a ball to encourage playful movement; the RDMT took an active role in the middle of the circle and the RMT would support the movements musically from the piano (positioned within the circle – see Figure 7.2) providing a musical accompaniment emphasising the dynamics of how people hit the balloon.

Figure 7.2 Example of people's positioning within the circle



Towards the end of the session the therapists reflected how moving it had been to hear people share something of their background and getting to know each other. The session then closed with a pre-composed song called 'Thank you for the music'. After the first session, feedback from the care staff indicated that some group member had reflected that it had been an enjoyable experience and a 'nice change to their routine'. The one exception was Irene, who chose not to continue after the first session. Despite efforts from the organisation to collect her each week she was clear that she did not want to continue.

7.2.2 Middle sessions of group one

The second session began with a warm up exercise to increase bodily awareness and participants were invited to touch hands. It was also noticeable that some quieter members such as Joyce and Mary needed much longer to come forward and participate. The therapists appeared drawn to individual needs making it difficult to hold the group together. For example, Rita expressed a desire to get up to dance with the RDMT while James began improvising a song with the MT.

At the start of the third session the carer reported that James had fallen and had been hospitalised. For the majority of this session there was four members present (Joyce, Mary, Rita and Raymond) as Beverly arrived very late. The session opened with a greeting song after which participants were invited to say names accompanied by an action or gesture. For the main improvisation The RDMT invited participants to hold a stretch cloth joining the circle together and 'make the balloon dance'. The RMT improvised music in response to the movement of the balloon rising and falling, although interestingly, the RMT gradually stopped playing and became an observer. It was noticeable, however, that the balloon game did draw Joyce into the group as she made a noticeable effort to try and hit the balloon.

Beverly arrived (45 mins into session) with her husband as he thought the group started at 3pm rather than 2pm. She was visibly upset about the confusion and arriving late and felt a need to explain herself. The group

welcomed her and invited her to sit down and there was a discussion about getting mixed up and the fact that she was dependent on her husband to go anywhere. It was very apparent the stresses of daily life that this couple faced.

7.2.3 Ending of group one

In the fourth session Beverly and Raymond arrived early and the therapists spent time talking individually until other participants arrived. Mary arrived (brought by her daughter) followed by Joyce (accompanied by her paid carer). Rita was absent this week as she was feeling unwell and James was still in hospital after his fall. Beverly spoke incoherently about her past, and particular associations she had with the hall we were in. Raymond also spoke a lot about his inability to remember things and reflecting on his daily life and his daughters telling him to do his exercises. He commented how music was a very useful thing for communication but something he could not do when he was at school. He recalled how he got kicked out of bible classes and would be out playing football in the playground. This led to an imaginative game where the group passed a ball around and for a while we were back in the school playground playing football with Raymond. There was also a focus on Joyce and whether she was able to kick the ball and comments about the activities in the group turning competitive.

Rita and James returned for the fifth session (however Beverly was absent). Rita was anxious that it was the last session and asked if it was going to continue. James had returned and there was noticeably more music and involvement from the RMT with his presence. There was a final balloon

improvisation involving Raymond, Joyce and Mary and the session finished with passing a percussion instrument around the circle. The therapists asked people to reflect on what they had enjoyed and Joyce who never spoke said that she had enjoyed hitting the balloon. At the end of the first group, some family members were invited to stay at the end for a cup of tea and biscuits. This idea was arranged by liaising with the care organisation as it felt important to make contact and gain an understanding of different participant's family contexts. Although some participants did not have any close family members, Mary's daughter and Raymond's wife and daughter attended.

7.2.4 Opening of group two

There was a five week break between the end of the first group and the start of the second. During this time, two new members were recruited: Frank and Shirley. Unfortunately, Mary was unable to make the dates for the second group and Raymond and James had both had falls and felt less comfortable leaving their house to attend the group. However, Rita, Beverly and Joyce all returned to take part in the second group. This created an interesting dynamic in the group as three members knew each other and two new members were unsure what to expect. The same paid care giver attended, which was helpful as she had been present in all the first group sessions.

Frank arrived first to the group with his carer; he appeared unsure about why he was here and said half humorously that he had been

kidnapped. Shirley lived close by and had been invited quite last minute by the local organisation. Frank brought a very different dynamic to the group; he was very verbal and this focused a lot of the therapists' attention in the first session. It also made it difficult at times to move into planned movement and music activities.

7.2.5 Middle sessions of group two

The second session of group two was attended by Rita, Joyce and Beverly. Frank's absence was noticeable as there was much less verbal discussion and an increased focus on songs (Moon River, Somewhere Over the Rainbow) and movement activities to help structure the session. Although Beverly had a strong wish to express herself verbally, a huge effort was required to find the language and thought processes needed. The session felt very fragmented and there was lots of confusion expressed as participants repeated pieces of information and struggled to orientate themselves to their surroundings.

Frank returned for session seven (his absence the previous week was because his daughter had been visiting) as well as Rita and Joyce. Frank again directed many questions at the therapists but appeared more self-conscious at times asking 'am I talking too much?' There was a need to move from talking to involve other participants and the RMT started an improvisation at the piano to shift Frank's attention. The RDMT then began some body-based activities: squeezing arms, rolling neck, swinging arms, moving legs. During the exercises Frank verbally grieved a loss of mobility

about not being able to play golf anymore. In the movement improvisation we threw a soft ball around the circle, the RMT provided accompanying music. This was particularly effective when Joyce had the ball, as she needed a lot of time to move her body. The RMT helped draw attention to her efforts, creating a suspenseful soundtrack to her actions. Throughout the session there were playful movement interactions and relationships developing between group members.

7.2.6 Ending of group two

The last two sessions of the group were attended by Joyce, Beverly, Frank. Rita was unable to make the ninth session but she returned for the final session. The paid carer (who had been present for all nine sessions so far) was unable to make the very last session so there was some uncertainty about transport even if this was resolved. This felt like a much smaller group now and more of the activities were centred around trying to draw Joyce in. She sat next to Frank in this session and their relationship continued to develop through the playful ball games. Joyce seemed to be revelling in the time she had with the ball and Frank had taken to encouraging her involvement. There was also more of flow between activities and appreciation of how people like to engage – Frank through singing, Joyce through throwing the ball, Beverly through touching the tactile stretch cloth, Rita through dancing. The group felt more interactive and able to structure things for themselves and the therapists reflected that there was a lot of listening going on during the final group improvisation.

7.3 Significant moments from the reflective tool

Immediately after each session the therapists were asked to complete the reflective tool to identify their perceived significant moment of the therapeutic process. For example, in one moment identified, the RMT described an instance of connection that led to a dialogue being established between her and James, who vocally harmonised with her on a familiar song. She showed how their interaction extended from singing a familiar song together into an exciting improvisation. After 'replaying' this moment, the RMT added additional information: she reflected that it had felt like an 'affirming' moment for this particular participant who 'heard himself being heard'. This added another layer of information, which helped contribute to the final thematic analysis. Figure 7.3 shows the moment when the RMT re-enacted it (I am on the right, playing the role of James).

Figure 7.3 The reflective tool: an affirming moment making a musical connection with James (being re-enacted between the RMT and researcher)



Another example that the RDMT chose was a moment from a movement improvisation that involved passing a balloon. The context of this scene was that the RDMT noted several moments in the session where Joyce, a more reserved member of the group, was becoming more and more confident and assertive. In her written reflection she noted:

Joyce was actively trying to get hold of the balloon, she then took it, looked at me, then threw it towards me!

Using the reflective tool, her embodied reflection was able to demonstrate the determined, assertive 'quality' of the movement that made such a significant impression on her in the session. By showing how Joyce pushed the balloon gave a powerful insight into how empowering that particular moment felt for Joyce. Embodying the experience provided a different way of knowing and this extra information was useful in both coding the video and providing additional insight into how a particular moment felt for the

therapists involved. Figure 7.4 shows the RDMT capturing the quality of Joyce pushing the balloon.

Figure 7.4 The reflective tool: the RDMT performing an empowering moment from the session



The reflective tool helped capture the quality of participant experience and used the therapists' connection to what felt meaningful to help understand the therapeutic process. Their awareness and appreciation of qualities and form brought an aesthetic motivation to the enquiry, considered valuable by arts therapy researchers (Hervey, 2000). However, as a data collection tool there were some difficulties in terms of time commitments and pressure put on the therapists: for example, if had been a particularly difficult session, it

was not always easy for the therapists to clearly identify specific moments - at times it was reported that they questioned their own memories about what had happened in the session. The therapists often needed more time to process what had happened, and this was addressed later in clinical supervision.

7.4 Clinical supervision and reflective diary

Over the study, there were five clinical supervision sessions (that took place between the group sessions) that involved the RMT and RDMT facilitating the group, myself and an experienced RDMT supervisor. These sessions provided a supportive space for the therapists to process events that had taken place in the group. As an active participant in the group interested in researching occurring phenomena, I was also invited to share my thoughts and experiences. However, the focus was primarily on supporting the therapists. The supervisor explored how the therapists experienced working with people with dementia, and what meaning they made of the work, often informed by their own internal experiences. Arts-based reflections were also used as an additional tool to safely explore difficult feelings generated by the group experience.

At the start of each session we were invited to share something of what we were left with from the previous group. We were encouraged to externalise these feelings through sound and movement and reflect on how they may connect to what was happening in the group. Sometimes these reflections came easily, others less so. For example, in one session I was

left with a deflated feeling, and in supervision, I represented this by a long exhale of air. Other times I might have felt a loss of control, and I tried to reflect this in the flow and energy of my movement responses, being pulled in different directions. If a session had been difficult to process, my own sound responses to the session became 'disconnected' or 'splattering', reflecting something of the fragmented interactions that had taken place in the session. This imaginative arts-based approach proved useful in providing some distance to explore some painful feelings: loss, absence, comfort, uncertainty. There was a recognition how the therapeutic process affects us emotionally and cognitively and supervision provided an opportunity to reflect, de-role and let go of these difficult feelings.

The supervision also allowed an opportunity to think of the best way forward for the group. For example, the RDMT might have noticed how the group had felt energised, even if people were only moving in very minimal ways. The RMT reflected on feeling like an outside observer in the group at times and whether she should be more in the circle? She was able to question her role and whether there was value in holding the group from a distance. For example, it was discussed whether the music could provide the framework for the movements to take place? The timing of the therapy sessions was also discussed as after the third session it was noted that people were making efforts to disclose some difficult feeling around living with dementia.

Although I took an active part in the supervision sessions their main purpose was to safeguard the participants and allow the therapists to share their feelings, experiences and concerns regarding the therapeutic process.

In addition, I kept a reflective diary to monitor my own emotional responses occurring during the group and all these various sources of data are included as part of the qualitative analysis used to generate the following emerging themes.

7.5 Emerging Theme: 'Making connections'

7.5.1 Subtheme: Connecting to musicality

It was noticeable from the first session how the group members responded to music and songs initiated by the RMT by tapping their feet and singing. The RDMT reflected after the first session:

There was a 'drawing in' of the group in response to rhythm and song, through the instruments and stamping feet, it felt like a coming together.

Through watching the video, I also noticed changes in facial expressions lifting and smiling as participants realised and acknowledged their name being sung (e.g. in the 'hello' and 'thank you' song at the end). The music helped provide a useful framework for self-expression. For example, during one improvised piano piece the RMT heard James vocalizing and making up his own lyrics to reflect what he was doing and the fact that he had his finger stuck in the tambourine. In that particular moment the participant was singing '*I've got my finger stuck!*' and as the music became quieter the RMT picked up on this refrain and the two began harmonising together,

exchanging musical ideas in a free flowing dialogue. It was clear that James was an able singer and the RMT had been able to harness this resource. On recognition that he was being heard, James remained focused and engaged and they were able to share an improvised dialogue that revealed how responsive and playful he could be. Afterwards he thanked the RMT for:

making the music come out...It's all up here (he tapped to his head) but you made the music come out.

James was then also able to reflect on when he used to sing in choir, reconnecting with his younger self. Using the reflective tool, the RMT chose this as a significant change from the session – what had felt like an affirming moment, when she described:

James had heard himself being heard.

Once James noticed that he was being listened and responded to he began to express himself more fully. There was a change of dynamic as the group, initially dependent on the therapists to play songs, became aware that that they had influence on how events developed.

Another example of how the group connected to the participants' musicality was with Rita whose love of dance provided her with an individual form of expression. On a number of occasions, she would get up and dance remarking:

I just can't stop myself from getting up.

There was a unique quality to Rita's movements; she was light on her feet and seemed transformed in dance. It was her response to the music and desire to dance that made changes happen with other group members too.

The RDMT recorded in her written feedback:

All the group got up to dance, we were looking at each other and smiling, holding hands.

Figure 7.5 shows a moment captured on video when some members of the group, instigated by Rita, stood up to dance.

Figure 7.5 participants connecting with innate musicality (image removed for reasons of confidentiality)

Singing also helped to join the group together in a shared activity and allowed people to bring their whole being into the sessions. As participant Frank exclaimed after singing the song 'Rolling River':

Oh yes, I love letting go!

Earlier Frank had spoken about how he spent the week very wrapped up in his head, spending time on his own in the house and getting paranoid that people were moving his possessions. His satisfaction after singing showed the huge relief and impact those few minutes had, when he enjoyed connecting with himself and others around him.

7.5.2 Subtheme: Connecting to the body

An aim of the therapy was to draw attention to the importance of the body and its capacity to hold emotions (such as pain or fatigue). Group members were encouraged to explore moving different parts of their bodies, reflecting on the sensory experience. Intimate interactions such as touching hands and focusing on bodily sensations (such as whether each other's hands were hot or cold) often helped people share experiences and enter one another's worlds. The RMT reflected how:

Group activities, especially those involving touch in the group setting, appeared to bring a real sense of cohesion and belonging.

Figure 7.6 shows a moment from the video data where participants are joined holding hands. The RDMT is verbalising on feelings and sensations evoked, helping to raise participants sense of self and awareness of others.

Figure 7.6 connecting through the body, touch and sensation (image removed for reasons of confidentiality)

For some participants, such as Beverly who had had a stroke, it was difficult to connect with parts of her body such as her right arm. However, despite these difficulties, she was able to explore using this arm through tailored group activities. For example, during improvisations she was encouraged to use this arm to hit a balloon. There was a sense of achievement and encouragement from everyone whenever she managed to connect with the balloon as it floated her way.

7.5.3 Subtheme: Connecting past and present

After the first sessions, I noted in my reflective journal that Rita often became focused on certain moments in her past that she would repeat aloud at different times.

Reflective journal: 20/6/17

Rita again spoke about her past occupation as a nurse and being the eldest child of a large family. She also began singing 'Ye Bank's and Brae's' again today, the music therapist accompanying softly on the piano. She often asks for this song in the session. It has a beautiful, longing melody and I noticed the other group members were humming along today. I think this helped her in some ways to be more present in the group – she did not repeat herself as much today. She seemed more interested in what was happening around her.

This journal entry suggests that being in the group may have helped Rita stay in the present with those around her. Songs also triggered autobiographical memories of the past for some group members. An example was after singing 'Lassie from Lancashire' one usually quiet participant spoke up:

I was born in Lancashire....me Grandad had a furniture shop...
so that's a long time ago.

This group member was unusually animated when she made this recollection and I remember feeling a sense of surprise at the change in her appearance. Again, what felt significant during these moments was that singing songs helped connect people's thoughts about the past to the here and now of the group.

Some of the participants lived close to the venue where the group took place and this also had an association with events in their past. This was shared with the group as they tried to re-orientate their selves in the present. The size of the hall and the actual environment seemed to evoke early memories for some, and one member spoke about childhood games such as playing football in the playground with a tennis ball before class:

When I went to school we always had prayers and hymns in the morning and I used to be in trouble sometimes...for spoiling the singing.

He went on to remember how before school he used to enjoy playing in the school playground with a tennis ball before connecting again with the present group saying:

It's funny how this group makes me think back to my early, early years and communication with different people – we're all different. I remember the teacher and the bible lessons – this is bringing a lot of it back.

The group also provided a space to imaginatively relive that childhood football game in the present (shown in Figure 7.7) and, in this way, allowed participants to share past experiences whilst providing opportunities to be creative in the here and now.

Figure 7.7 connecting past and present: the group playing with ball after one group member had spoken about playing football at school (image removed for reasons of confidentiality)

After this session, in group supervision we discussed the strong need for some participants to verbally share their past stories and be listened to. This was particularly true for Raymond who had acknowledged that he could 'play a part' to a greater extent in the movement-based activities, however he often appeared contemplative and articulate. We also discussed how songs and creative movement might help less verbal members share something of their identities. For example, the therapists considered providing a movement framework, eliciting favourite songs, and bringing meaning to the sessions by saying 'thank you' for something in each group member's life.

7.6 Emerging theme: 'Acknowledging grief and loss'

7.6.1 Subtheme: peer support

Many members of the group appeared to enjoy the company and relish time in the group. It was also apparent how caring and empathic participants could be and there appeared a deep understanding of the challenges each other faced. Raymond talked with regret about not being able to do the things he used to and mentioned gaining 'just a glimpse' of how bad things could be. He sometimes seemed apologetic at his self-perceived lack of contribution, and mentioned a few times about feeling useless:

I can participate to a certain extent, but I can't really do much.

The therapists acknowledged these difficult feelings but it was noticeable how quick the participants were to offer support and encouragement to each other. When one participant remarked about her illness:

For a while I couldn't speak properly, I still can't now, but I'm trying.

The group responded by saying how well she was doing and also acknowledging their own difficulties with language finding words. One participant articulated that he had valued hearing the experiences of others in the group by commenting:

It's been good to learn how others cope.

7.6.2 Subtheme: expressing anger and frustration

One participant who was able to express his anger in the group was Frank, who was paranoid that people were stealing things from his house. He mentioned how this was making life difficult between him and his family, but he was angry at himself for accusing people of stealing. Another member of the group reassured him that he had to learn to forgive himself, to which Frank responded despondently:

but it's hard to let go when it's in your head.

He then looked up and asked the therapists:

but this group might help?

In the musical improvisation that followed, Frank chose to play the cymbal, loudly at first, but then reducing in volume, with a growing recognition of others around him. Figure 7.8 captures a moment on the video when Frank began crashing the cymbal after talking about his paranoia.

Figure 7.8 Participant expressing frustration on cymbal (image removed for reasons of confidentiality)

7.6.3 Subtheme: supporting difficult feelings

Difficult feelings concerning death and dying were expressed in the group. There were some verbal statements articulated that went unanswered because they felt too difficult to talk about. For example, one participant remarked that she looked forward to going to heaven. She spoke about her husband with whom she lived at home with and how she:

hoped the Lord takes me before him.

During these moments, singing seemed to have particular value. The RMT was able to meet the silence at times with various hymns (e.g. Swing Low Sweet Chariot; Que Sara) and this appeared to help contain group members' anxiety. Endings for both groups felt particularly difficult. The

extract below is from my reflective journal I wrote shortly after the last session of group two:

Reflective journal: 12/09/17

The participants arrived early and there was a sadness voiced by many in the group today. Rita was very concerned that it was our last session. Would we see each other again? What was going to happen next week? She returned to these questions frequently. Nobody seemed to want to start singing - even the therapists held back. The space was left open and some difficult feelings emerged. Beverly was tearful, asking what I was going to do next? The ending had stirred up a lot of other endings and it felt difficult to provide an answer. I felt a huge sense of loss as I looked over to Joyce who seemed very isolated. She almost had her eyes closed. Frank randomly initiated 'White Christmas' and there was a brief improvisation with some percussive instruments. Then we did a breathing exercise and I watched Frank slowly exhaling air. The overall feeling I'm left with is one of deflation. I had an image of air leaving the balloon. A balloon that had been so central to the connections made - a symbol of our community.

This journal entry seems to be regarding the balloon as a representation of the sense of community created that supported the difficult feelings to be expressed. These images and feelings arising from the group were explored further in clinical supervision as an important part of the data collection process. For example, after this particular session my audio response was a long exhalation of air as I thought about the balloon and the group ending.

This was compared to the therapists own responses (for example, the image of an endless waterfall) to try and safely process our lived experience.

7.7 Emerging theme: ‘Growth and empowerment’

7.7.1 Subtheme: an empowering experience

Despite difficulties in verbal communication the group provided opportunities to interact through playful movement, singing and shared music making. The task free nature of the group allowed members to creatively explore music and movement with no right or wrong way of doing things. In her written feedback, the RDMT reflected on whether there had been any changes for individual participants:

I invited Raymond to dance, he said he would like to but that he never danced or sang. But he got up and we danced and sang together!

One of the noticeable things about the group was that it was not cognitively challenging and rather participants were encouraged to enter into a world of feelings, sensations and playful activities. In this context, participants were able to rediscover things they could do (such as singing and moving) and presented with enough challenge to keep participants engaged and motivated. The group were able to be at ease together because the tasks did not require succeeding. In fact, participants often seemed disappointed whenever they were told that the session time was nearly over, lamenting:

It's amazing how fast the time goes here.

Physical props (such as the balloon) also helped the group explore new ways of being together and having fun. As one therapist reflected:

The participants leaned forward in the chairs to hit the balloon, some kicked it with their feet and others laughed, some hit it with their head!

Figure 7.9 shows participants involved in a group activity that involved passing a balloon around the circle. The activity provided opportunities for non-verbal interaction and brought a sense of playfulness to the sessions. There was a sense of warmth and humour in the group that developed through the activities.

Figure 7.9 Participants engaged in hitting balloon over stretch cloth (image removed for reasons of confidentiality)

Although most of the session people sat down, group members were on occasion encouraged to stand up: sometimes this generated some anxiety about whether the person might fall, but it also saw them do things they would not normally do. The participants were encouraged to increase their movement repertoire: for example, one participant spontaneously initiated

moving his arms in the air after the warm-up activity. This was observed by the RDMT, who responded by mirroring his behaviour, and this encouraged other participants in their own exploration. As one participant exclaimed humourously when told he could be as free as possible in his movements:

What.....no restrictions!

7.7.2 Subtheme: shared playing

Physical props like the stretch cloth, with sensory qualities of touch and colour, were helpful in making connections between group members. In particular, it provided a good opportunity to gain appreciation of the quieter members of the group who needed more time to come forward and participate. One such participant was Joyce who often remarked that she wasn't sure what to do and this seemed to be reflected in her uncertainty when it came to playing. It therefore, felt very significant when she finally made a decision to hit the balloon or else connect with an instrument to make a sound. The therapists noticed early that although she did not say much she felt very present in the group.

In group supervision we reflected on Joyce's ability to be present in 'minimal ways' and thought about the extra time and close proximity she needed to come forward. In later sessions, to encourage Joyce to play, the therapists provided her with opportunities to take control of the balloon each week, and created a musical accompaniment. This brought a sense of suspense and meaning to her gestures that could otherwise have gone unnoticed.

7.7.3 Subtheme: Increased awareness of others

It came as a surprise one week when Joyce and Frank began showing an increased awareness and interest in what the other was doing. The therapists noticed how Frank adjusted his music so he was not playing too loudly on the cymbal and instead lowered his volume so to hear Joyce who was sat next to him. Then during a playful movement activity involving a ball, Joyce intentionally threw the ball over Frank to another participant. This was a deliberate, intentional throw, and the group immediately recognized Joyce's humour. This was a significant moment as it clearly showed how Joyce was aware of Frank and what he wanted her to do and she did the opposite! Afterwards it was commented upon how we got a sense of the real Joyce.

The increased awareness of others and harmony within the group was also evident in my last journal entries.

Reflective journal

The session ended with everyone holding hands in a circle. There was a sense of camaraderie or companionship; as if we had been through something together. Rita asked again what would happen now that the group was ending? The therapist made a verbal response about loss and how we only miss things that have value. Rita nodded in agreement and said it had been wonderful to meet everyone. The sentiment seemed to be shared around the group. Relationships had been born through music and movement, and bonds created. Within the circle there was a sense of

acceptance. It was interesting that there was so little music or moving in the last session. Instead there seemed to be a need to acknowledge the relationships made and to say goodbye.

This journal entry highlights the new relationships that I sensed had grown in the group. There was little active music or movement but a willingness to reflect on the value of being together. Although this was hard to put into words it was an experience that felt significant for myself, the therapists and evident from comments by participants such as Rita who was able to verbalise what others too might be feeling.

7.8 Quantitative findings

The proposed outcome measure was the Cornell Scale for Depression in Dementia (Alexopolous et al, 1988), which required an informant (either a family member or a paid carer) to assess symptoms of depression over the past week. Out of the nine participants recruited, quantitative data was collected for six participants. Two participants were excluded as they joined late into the study; and one participant was excluded from the analysis as they dropped out after the first session. The remaining six participants attended the majority of their allocated group sessions and the scores were taken at baseline (on the week leading up to the study) at five weeks (at the end of the group) and at 10 weeks (as a follow up measurement). Table 7.2 shows the scores for the seven participants.

Table 7.2 Participant quantitative scores on the Cornell Scale for Depression in Dementia Scale

Participant	Sessions attended	CSDD (baseline)	CSDD (Post)	Change	CSDD (10 week follow up)
1 Mary	5 (100%)	3	1	-2	2
2 James	3 (60%)	12	6	-6	8
3 Joyce	5 (100%)	6	2	-4	2
4 Rita	4 (80%)	4	4	0	4
5 Raymond	5 (100%)	6	2	-4	10
6 Beverly	3 (60%)	12	4	-8	8

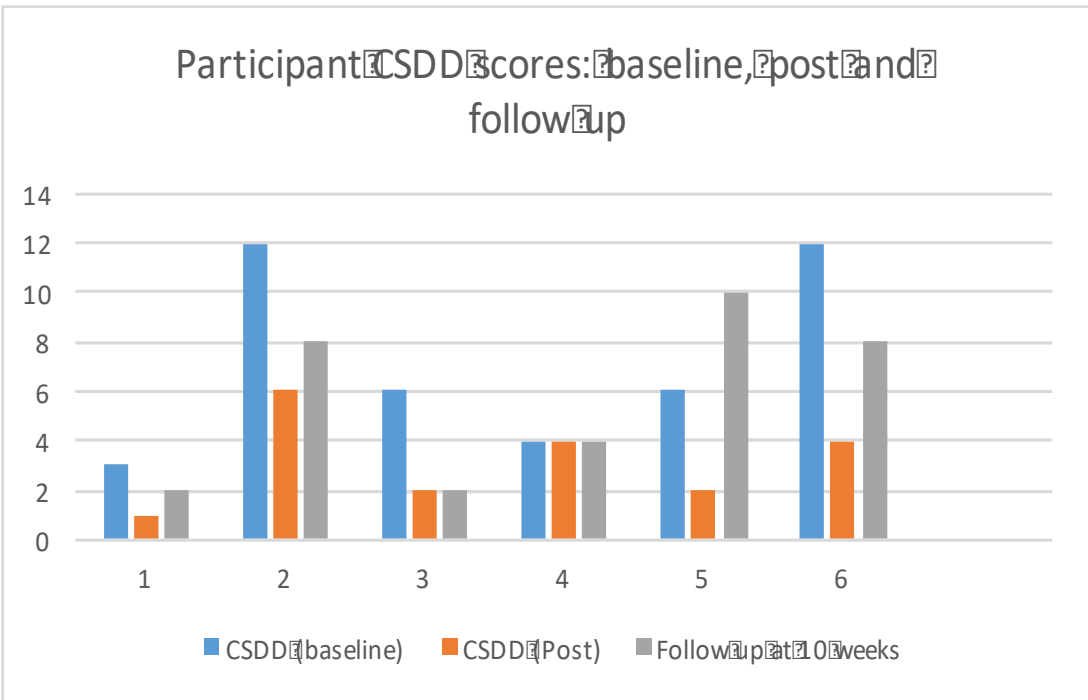
Note: Scoring system: 0 = absent/unable to evaluate; 1=mild or intermittent; 2= severe. Ratings based on symptoms and signs occurring during the week prior to interview. No score should be given if symptoms result from physical disability or illness. A score > 10 probably major depressive episode.

Table 7.2 shows that James and Beverly both scored high on the baseline interview and this had improved at the 5 week follow up. James saw a large reduction (12 to 6) in depressive symptoms after 5 weeks and a slight increase (8) in the ten week follow up. Beverly also saw a reduction in depressive symptoms (12 to 4) although this rose (to 8) in the ten week follow up. Both of these participants had 60% attendance. For Mary, who attended all the sessions, her depressive symptoms went down very slightly (from 3 to 1). There was also a reduction in depressive symptoms for Joyce

between baseline and 5 weeks, which had stayed the same at further follow up. There was no change in depressive symptoms for Rita throughout the three assessment periods. Raymond saw an improvement after five weeks, however when the researcher followed up at ten weeks, his score had increased substantially (he was experiencing a number of difficulties due to a recent fall).

The bar chart in figure 7.10 shows the individual scores over three time periods. The intervention appeared to have the greatest impact on the scores of those individuals who scored highly for symptoms of depression at baseline.

Figure 7.10 Bar chart displaying individual participant CSDD scores



In order to test if the intervention had a group effect the mean scores of participants were calculated and shown in Table 7.3.

Table 7.3 Cornell Scale for Depression in Dementia: Mean scores

Time	Baseline	5 weeks (post)	10 weeks (follow up)
Mean	7.17	3.17	5.67
Standard deviation	3.92	1.83	3.44

Note: increase scores indicate increased depression

As can be seen from Table 7.3, the mean scores on the CSDD fell during the treatment phase before rising again slightly at the ten week follow up. As the data was non-normally distributed a non-parametric test was used to look for differences between mean baseline and post test scores to measure any preliminary findings for treatment effect. The results of a Wilcoxon signed-rank test run on SPSS indicated that the post CSDD score (mean score = 3.17) was statistically lower than the baseline CSDD score (mean score = 7.17): $Z = -2.032$, $p < .042$. This difference was accepted at .05 level of significance. Comparison with scores from the follow up assessment (mean score = 5.67) and baseline CSDD score (mean score = 7.17) found no significant difference: $Z = -1.131$, $p < .258$.

7.9 Chapter summary

This chapter has provided a description of the setting, participant attendance and how the life of the two groups opened and closed. It has documented

how the therapeutic process developed, including data generated through the use of the reflective tool and clinical supervision. Photo stills are also included to highlight significant moments. The key themes emerging from the qualitative analysis included: 'making connections', 'acknowledging grief and loss' and 'growth and empowerment'. The results of a Wilcoxon signed-rank test indicated that the post CSDD score was statistically lower than the baseline CSDD score.

8 Discussion

Chapter overview

This chapter brings together qualitative and quantitative results to explore the value of the community-based MT and DMT group. First of all, the benefits and challenges of combining aspects of MT and DMT are discussed. Then any patterns between the data are explored between participant experience and standardised measures. The emerging themes are examined in relation to existing arts therapies research studies and the wider field of arts and health. Finally, it highlights some of the difficulties of conducting a community-based study in terms of recruitment and securing reliable outcome assessors. The overall risk of bias and trustworthiness of the study are also considered.

8.1 Findings

8.1.1 The value of combining MT and DMT

The main intent of this study was to explore how a combined MT and DMT group could be implemented in a community setting. The treatment manual (presented in chapter five) brought together aspects of MT and DMT, documented the theoretical underpinning of the intervention, and provided guidance for the therapists by suggesting techniques based on the evidence gathered in the systematic review. The thematic analysis (presented in chapter 7) showed that therapeutic components such as regulating arousal,

increasing bodily awareness and improvisation were key ingredients in delivering the intervention.

Through the use of music, touch and playful movement improvisations the therapists were able to tailor their approach to individual need. For Joyce who lacked the cognitive function to take part in verbal prompts or even answering her name, this was evident in how they were able to build on her minimal responses and increase her overall functioning and participation within the group. For other participants, such as James, the musical elements such as active singing provided a familiarity and comfort linking back to his earlier experiences in a choir. The music often spontaneously engaged James in singing and he had a huge repertoire of songs learned by memory. In a similar way the music encouraged Rita to dance and may have triggered specific autobiographical memories. For others playful movement improvisations that provided opportunities to be in control facilitated self-expression.

By presenting opportunities to engage with participants the therapists were able to create a context in which individual personhood could flourish. Different participants valued different modalities and having the benefits of both therapists facilitated greater engagement in the therapeutic process. This is supported by other arts therapies literature combining MT and DMT. For example, Colbert and Bent (2018) found participants valued having both media available as it enabled greater spontaneity, supported an atmosphere of experimentation and co-operation and expressing a wide range of feelings. Participants also reported finding a new-found awareness of their bodies through and a greater connection between body and mind.

8.1.2 Challenges in combining aspects of MT and DMT

Collaboration with other health care professions brings challenges (Twyford and Watson, 2008) and it was interesting to see how such a combined approach worked in practice. Over the first few sessions the therapists adopted different roles: the RMT led singing familiar songs and provided improvised musical responses; the RDMT led the playful, movement-based activities, and drew attention to bodily experiences. However, there were moments the RDMT sat silent whilst the RMT played familiar songs, or else the RMT sat silent whilst the RDMT spoke through body awareness exercises.

In the early sessions there were moments when each therapist seemed unsure of using their own modality (i.e. improvised music or expressive movement). For example, during one session there was an interesting transition when the RMT starts at the piano facilitating singing by providing a harmonic arrangement of a familiar song. Then when some of the group members get to their feet, encouraged by the RDMT, the RMT stopped playing music and joins the circle. It is interesting to wonder why the music stopped in this context. Was this a DMT group with improvised music? Or an MT group using expressive movement? There was some tension at times in deciding the balance and how the therapists moved between activities. The therapists explored this tension in clinical supervision and over the course of the ten weeks gradually grew more confident in their roles.

As the therapists became more familiar, there was some overlap in roles where the therapists responded to each other's input. For example, the RMT accompanied shared play activities such as bouncing the ball on the stretch cloth; the RDMT joined in the familiar songs and/or encouraged physical engagement while singing. However, it was only in later sessions that the music and movement were able to come together more creatively. For example, the main theme for each session often involved a playful movement improvisation using a ball, balloon or stretch cloth to make connections between members of the group. At first, the RMT moved away from the keyboard and joined the circle during this activity. However, in later sessions she was able to provide music and sound to add dramatic effect to Joyce's minimal movements. These responses were creatively improvised and effective in increasing the group's awareness of Joyce's individuality.

In a recent arts therapies publication, Jackson (2018) describes her work bringing music into a dramatherapy group for adults who have challenges in their verbal capacity. In her concluding thoughts she describes how each of the creative arts therapies is unique and has its own characteristics and specialisms and reflects:

I have shown ways that I confidently bring musical abilities into dramatherapy. However, I do not have the training of a music therapist...similarly, I also use art and movement as creative mediums in sessions, but am not qualified as an art therapist or dance movement therapist, and value the specific trainings

and qualities that each of these distinct professions bring
(p.70)

This quote implies that even though arts therapists may have training in other art forms, there is often a commitment to a specific discipline, and a recognition of the value inherent in each separate modality. Although collaboration brought some initial uncertainty, the RMT and RDMT were able to rediscover their roles as distinct clinicians within a new creative partnership. This was in no small part due to their individual personalities and willingness to be open and try new ways of working.

8.1.3 Frequency and treatment duration

There were signs that the group would benefit from extending the session time beyond one-hour. The participants appeared to welcome time spent with a supportive peer group and frequently arrived early before the group started, and were reluctant to leave at the end. In future, increasing the session time to one hour thirty minutes may be more suitable. There is also a dilemma about how often to offer the group as a number of participants expressed that they would like more activities similar to the group as part of their weekly routine. It was not clear how many social activities different members participated in but at least one member remarked that it was the only time she got outside the house, and others remarked that it made a nice change from watching television.

The role of family members also needs significant consideration. At the end of each five session block, partners, sons and daughters were invited to share a cup of tea. Although not everybody took up the offer, some family members clearly had an interest in what was happening in the group and could provide valuable information about the impact dementia was having in the context of their family life. There were also indications that a longer running group would be of more value to support people who may have negative feelings around their diagnosis. For example, some group members disclosed difficulties in their lives that could not be addressed in such a short time period.

8.2 Patterns between the qualitative and quantitative data

The quantitative results indicate that there was a significant difference between the post and baseline scores as measured by the CSDD. However, comparison with scores from the follow up assessment and baseline CSDD scores found no significant difference. Although this quantitative data should be treated cautiously, the findings do support existing literature that a music-based therapy group would provide a short-term reduction in symptoms of depression and concurs with recent recommendations from a Cochrane review regarding this outcome (van der Steen et al, 2017). With regards to DMT, it provides evidence still missing from the literature regarding potential quantitative outcome measures.

However, in both cases the small number of sessions and sample size make it difficult to place confidence in results.

Previous studies identified in my systematic review (Ashida, 2000; Chu et al, 2014) also used the CSDD to measure symptoms, though the frequency of the intervention was different: Ashida (2000) used a more intensive intervention daily across one week; the Chu et al (2014) intervention was twice weekly over 6 weeks. To deliver the therapy at this level of intensity may have been problematic for a community-based study, which depends on the capacity of carers and family members to transport participants to and from the setting. Also, the clinical methodology adopted in both previous studies was different; Ashida (2000) used small group reminiscence focused MT, and Chu et al (2014) used a protocol developed by Clair and Bernstein (1990) that focused on gross and fine motor movements performed to music. This study was less structured and more client led, aiming to encourage and facilitate self-expression through improvisation and shared play.

The quantitative findings suggest the group had most impact on James and Beverly, and these scores also appear to be supported by several significant moments of creative expression. For some of the other members in the group the qualitative data revealed important events that were not picked up on the quantitative scores. For example, the data showed Rita re-connecting to her love of dancing and song, she was particularly emotional at the end of the group suggesting that she had valued the experience. Her quantitative scores (completed by her carer) do not reflect any change. Joyce's gradual growth in assertiveness over the weeks

was noticed by everybody in the group: the therapists frequently reflected on moments they were surprised by her willingness to engage and the powerful feelings she often evoked in them throughout the therapy. The video allowed a closer inspection and often confirmed these changes; yet her quantitative scores do not reflect these changes and suggest limitations of this standardised measure.

In previous studies (Coaten, 2009; Hsu et al, 2015) video and qualitative data has been essential in capturing embodied ‘in the moment’ experiences missed by existing quantitative outcome measures. The findings from this study support other research (Wilkinson et al, 1998; Ridder and Aldridge, 2005; Sole et al, 2014) concerning the need for multiple forms of evidence to capture subtle processes of change in arts therapies.

8.3 Emerging themes in the context of wider literature

Many previous studies have focused on participants living in nursing homes with more advanced stage dementia (Ashida, 2000; Nystrom and Lauritzen, 2005; Ridder et al, 2013; Chu et al, 2014; Hsu et al, 2015). This study was different in that it focused on people living in their own homes, often experiencing loneliness and isolation in the context of community care.

Although beginning a new group situation may present challenges for older adults living with dementia, many participants expressed a gratitude for getting them out of the house. There also appeared a strong need to accept changes due to dementia and a desire to be part of a supportive peer group. This is illustrated in the key themes generated from the qualitative analysis.

8.3.1 'Making connections'

The group created opportunities for participants to 'make connections' to their own sense of self and those around them. In the first group, the RMT identified how connecting to James's musicality was an important feature of the sessions he attended. For example, James often described the group as a 'happy place' to be where he could enjoy connecting with aspects of his past identity (when he used to sing in a choir) which seemed to empower him in the present moment by drawing on his musical resources. The capacity for MT and DMT to facilitate connections is supported by a theory of 'communicative musicality' (Malloch and Trevarthen, 2009) that describe how music and dance serves our need for companionship just as language serves our need to share facts. Singing, moving, and working at a bodily level supports the foundation of communication – the basis of human companionship.

There may be a strong argument that a combined MT and DMT approach enables patients to feel more connected with themselves and others. Working within an acute mental Colbert and Bent (2018) described their sessions combining music and movement as tribal gatherings where people come together to sing, dance and make music. Beginning their group sessions with a movement was seen as a way of connecting to self before the more interpersonal act of making music together. This approach that starts with the body may also be useful for people living with dementia in the community.

8.3.2 'Acknowledging grief and loss'

The group offered participants the opportunity to express their emotions within a supportive peer environment. This finding supports Ahonen-Eerikainen et al (2007) argument that arts therapies are 'always a psychotherapeutic process' in which group participants are first allowed to deal with their difficult feelings in a safe space provided by a professional, skilled therapist (p.58). Although brief, both therapy groups allowed participants to express frustration, irritation, sadness and worthlessness: Frank's anger decreased as his recognition and awareness of the others increased; Raymond was able to acknowledge his own feelings of stupidity and not being able to do much, which was transformed into a playground game in which he was able to reconnect with Raymond the mischievous school boy. Beverly appeared to relish time in the group but also needed to express her frustrations about losing language and other personal difficulties.

Clinical supervision allowed an opportunity to develop a greater insight into the emotional content of the group. Using sound and movement metaphors helped provide a distance and way of managing difficult feelings. Creating a dialogue with sensory data was an important element as the therapists and researcher learned to trust the body as a source of data and rely on their understanding of body experience as a form of data analysis (Hervey, 2000). Also, accurately reflecting movement qualities in the reflective tool entailed the intelligent use of kinaesthetic empathy from the RDMT.

8.3.3 'Growth and empowerment'

Despite the huge amount of loss and grief in dementia care the group showed capacity to focus on what can still be done, offering hope that life can still be worth living. The MT and DMT group placed value on vitality, a quality that reflects affirmation and connection to life, and rather than focusing on the cognitive challenges dementia entails, the group opened up a world of feeling and sensation. The therapists allowed relationships to develop at a bodily level and this was very important for group members who were often restricted by language. Regulating arousal and emotional vitality helped create meaning between therapists and participants, as explored through the reflective tool.

The findings also highlight the importance of 'playing' to the therapeutic process. Amongst arts therapists 'playing' is a term synonymous with the work of Donald Winnicott who associated playing with a quality of living. In his book 'Playing and Reality' (1973) he states that it is only in playing that we are able to be creative and to use the whole personality, and it is 'only in being creative that the individual discovers the self' (p.73).

Although elusive, Winnicott's descriptions do chime with experiences within the group. For example, the delightful moment when we recognised Joyce's humour and personality when she spontaneously threw the ball over Frank's head, within the context of a playful movement game.

'Play' is also identified by Kitwood (1997) as an element in positive person work to enhance personhood and wellbeing in the advance of cognitive decline. Kitwood (1997) described play as the provision of appropriate activity and enablement of self-expression. Through playful

movement activities such as rolling a ball or sharing an instrument group members were enabled to participate. In a recent paper, Kontos and Grigorovich (2018) have argued for a model of 'relational citizenship' where opportunities for play and creativity is of ethical significance in the context of dementia as it directly contributes to an individual's flourishing. The group showed how the arts can inspire motivation and provide the medium for connection, empathy and playfulness to happen.

8.4 Limitations of the study

8.4.1 Recruiting participants

In the planning of the project it was anticipated that one local care organisation in particular would have access to participants who met the inclusion criteria. In the months prior to the study commencing, I met regularly with this organisation to consider practicalities of setting up a community-based group. One of the main issues discussed was whether potential participants needed the diagnosis of dementia to take part in the study. There was concern about the stigma still attached to having a diagnosis of dementia: for example, there were potential participants who met the eligibility criteria who did not yet have, or want a diagnosis. During these meetings there was apprehension over whether to recruit people thought to benefit (for example living alone and isolated within the community yet without diagnosis) or whether to exclusively recruit participants with a diagnosis of dementia.

Ultimately, and in keeping with the protocol that had gone through a rigorous NHS ethics procedure, it was decided that a diagnosis was needed, and that the organisation would only approach eligible clients to assess initial interest about the study. The eligibility criteria had specified a diagnosis was necessary, though in reality, this proved an important factor for consideration. The recruiting organisation recognized that there were a number of their clients who were very isolated in the community and would likely benefit from the group. However, many of these potential participants (with mild cognitive impairment or suspected dementia) did not yet have the diagnosis and were therefore excluded from participation.

8.4.2 Risk of bias

The study demonstrated that there were problems with the outcome measure, not least because of a lack of certainty who the informant providing the assessment would be. Although I sought responses from participants where possible, the Cornell Scale for Depression in Dementia (Alexopolous et al, 1988) is a joint interview and needed someone who knew the participant well to act as an informant. For some participants who had no family close by there was a reliance on paid home carers who had busy schedules, often moving between several houses in one day. This was not straightforward and at times there were some conflicting responses where the researcher had to make his own judgement. For example, one of the questions concerned getting up in the night after speaking to his wife and daughter it was clear that repeated awakenings in the night was becoming a

very difficult issue for the family. However, the participant's answer contradicted his family's as he did not remember getting up.

There were also some difficulties with one couple where, in the joint interview, the husband answered all the questions on his wife's behalf. This was not due to a domineering nature, rather embarrassment on his part that she may not be able to provide a verbal response. He was also very much struggling with his wife's recent diagnosis of vascular dementia, and the interview proved a very emotional experience for all involved. It also raised some difficult issues regarding capacity, when to answer on someone else's behalf, and how much time to allow for a participant to try and make their own response.

For a number of participants, who had no family living close by, it was decided that the paid care giver who attended their house could act as their informant. For these interviews, I was unable to meet the paid carers and the participants at the same time due to their shift patterns. Instead it was decided to carry out these interviews at their staff office when it was possible for them to attend (many of the paid carers moved between houses during the day). The interview required the carers to report on observations of the participant's behaviour during the week prior to the meeting. However, the frequency that different paid carers visited participants varied and this made a number of responses on the questionnaire difficult to gauge. For example, one question asked whether there had been multiple awakenings during the night? Or whether there had been early morning awakenings or difficulties falling asleep? These were impossible for the carers to answer as they only saw a particular individual in the afternoons.

Furthermore, in liaising with family members, it could not always be guaranteed that the same informant would be there to answer the questions over the ten-week period. For example, on the baseline scores, I interviewed the daughter of one participant, however, on the follow up I interviewed the wife (the daughter was away on holiday for a substantial period over the summer). The reliability of the scores are likely to have been affected due to the lack of consistency in outcome assessors. In future community-based research, the care partner dyad strategy needs to be carefully considered. The success of the study may depend on the willingness of carers to transport participants and act as proxy's for any outcome measures. There may be an important role for interventions supporting the relationship and wellbeing of both care giver and person with dementia as suggested in other community-based research (e.g. Camic et al, 2011).

8.4.3 Trustworthiness

The study used multiple forms of data (video, reflective tool, journal) from multiple perspectives (researcher, therapists, clinical supervision) to help confirm my own interpretations. Further verification could have included member checking, which has been considered the most important strategy to ensure credibility (Lincoln and Guba, 1985). However, the study followed a protocol that was developed for a NHS ethics application. As part of this protocol, I had to specify the methods of data collection in advance and decided against verbally interviewing participants on ethical grounds.

In hindsight, there were some participants who may have been able to report on their experiences. A more suitable method though may have included focus groups with relevant staff and family members (similar to Tuckett et al, 2015) before and after the intervention. In the final sessions of the two groups, the family members were invited to stay after the session for an informal chat. During these chats, the researcher learned valuable knowledge about participants' behaviour that helped shed light on happenings in the group. This input may have helped verify the themes generated from the final analysis and how the process was meaningful for participants.

8.5 Chapter summary

This chapter has discussed the value of combining MT and DMT, drawing on limited literature in this area. It brings together the qualitative and quantitative findings and highlights the challenges of a community-based group. It has described the difficulties completing existing outcome measures and supports other research studies arguing the need for multiple forms of data to capture and document the subtle processes of change within arts therapies. Including arts-based information as part of the data collection helped explore the emotional content of the group. It has discussed the contribution this study makes in terms of the context and clinical approach employed. The limitations, risk of bias and trustworthiness of the study have also been discussed.

9 Conclusion

The research presented in this thesis explores the value of MT and DMT for older adults with dementia. The first stage examined the existing empirical evidence base by conducting a systematic review addressing the question:

What is the evidence that MT and DMT improve health and wellbeing for older adults with dementia?

The review identified qualitative evidence from DMT suggesting the importance of embodied communication to wellbeing and quantitative evidence that MT can improve short term symptoms of depression and agitation for nursing home residents. Theoretically, both disciplines worked to establish an environment to meet psychosocial needs and celebrate personhood. Therapeutic components across studies included regulating arousal, increasing bodily awareness and improvisation.

The findings from the review were then used to develop an evidence-based treatment manual for a collaborative model of practice to be tested in a community setting (an area under represented in the literature). A theoretical framework was presented and a mixed methods approach adopted including an arts-based data collection tool to further investigate significant moments in the therapeutic process. The research question for the second stage was:

What is the value of a particular MT and DMT group for older adults with dementia living in the community?

Following guidance from the MRC for complex interventions recognising the importance of process (Craig et al, 2008; Moore et al, 2015) a case study design tested how the intervention was implemented in the context of the community, collecting multiple forms of data. The qualitative analysis generated three main themes: 'making connections'; 'acknowledging grief and loss'; and 'growth and empowerment'. Quantitative findings suggest that a combined MT/DMT approach of five sessions had a short-term impact on symptoms of depression for older adults with dementia. This was a short intervention that in future would need to be extended to a longer time period with a larger number of people.

9.1 Practical applications and clinical implications

The findings from the systematic review provide an up to date synthesis of the evidence base for MT and DMT and dementia. Focusing in particular on the interdisciplinary relationship between MT and DMT, qualitative findings from the review show how an active, improvisatory, embodied approach may be of particular value to older adults with dementia. Combining the two therapies embraced the fluidity and complementarity between music and movement and created a richer environment in which to celebrate personhood.

To the authors knowledge this is the only group study looking to combine MT and DMT for this client population. Only one previous study

(Hill, 2006) reports the involvement of both a RMT and RDMT. However, the description of the methodology provided no details except to say that a RMT improvised responses to the dance/movement interaction (Hill, 2006). As this is the first time that a RMT and RDMT are working jointly to deliver a group intervention for this client group for research purposes, this study makes a very unique contribution to the literature.

The collaboration brought benefits for the individual therapists involved including professional and peer support, and increased awareness of another modality. These benefits are also described in other arts therapy literature (Twyford and Watson, 2008; Karkou, 2012; Colbert and Bent, 2018; Oldfield and Carr, 2018). Increasingly, as the group progressed, the joint-working between the therapists provided an enhanced sensory environment for the participants. Similar to findings from Melhuish et al (2015) the project also highlights the similarities of the MT and DMT approach that the shared aim of the work is to facilitate emotional expression and the development of connections and relationships with others (Melhuish et al, 2015).

There were some moments of uncertainty when therapists seemed unsure of their roles. However, through exploration in clinical supervision, each therapist grew in confidence, allowing room for freedom and spontaneity and the exchange of ideas. The idea that processes from one art form can translate to another to facilitate creative interaction across boundaries has been further explored in research groups such as 'Concurrent' - a cross-disciplinary network of musicians, dancers, arts

therapists and psychologists (www.concurrent3.net) and more recent in the project 'Art for the Blues' (<https://artsfortheblues.com>).

9.2 Recommendations for future research

This PhD provides substantial new knowledge evidenced in many areas: a systematic review of primary sourced literature; synthesising findings from two disciplines; developing a research-based treatment manual; testing the intervention in a community setting; exploring validated outcome measures and utilising arts-based methods. To meet the demands of evidence-based practice, arts therapies research needs innovative study designs that can capture the subtlety of the therapeutic process as well as contribute to questions of effectiveness. Future community-based studies are needed but there are important future issues to consider including:

- 1) Continuing uncertainty regarding outcome measures: although findings suggest symptoms of depression may be a suitable health outcome there may be issues securing reliable informants for older people with dementia in the community. The inclusion of qualitative and arts-based methods is also recommended to capture subtle processes of change.
- 2) Recruitment strategies: to increase the number of people necessary for a larger trial, a recruitment strategy needs to involve GPs, memory clinics and specialist hospitals who are able to refer people at the point of diagnosis. Attention should also be paid to the time commitment needed for researchers recruiting people with dementia and the

importance of face to face contact and a personable approach (rather than a reliance on digital advertising, for example).

- 3) Ethical considerations: the immediate needs of older people with dementia living in the community should be paramount, and consideration needs to be placed on whether it is unethical to make people wait for treatment (for example, as part of a control arm in a RCT).
- 4) The care partner dyad: the needs of carers and family members should be considered, especially their willingness to commit to the study in terms of outcome assessment and transport requirements. There may be an important role for a community-based intervention to support the relationship and wellbeing of both care giver and person with dementia.
- 5) Treatment duration: Practicalities from the treatment manual suggest that the groups could be longer in duration. Also, there appeared a strong desire for participants to meet in a supportive peer group, and a longer running group could be useful especially in supporting participants with negative feelings around their diagnosis.

10 References

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11 Appendices

Appendix 1 – Data extraction sheet

Appendix 2 – Level of evidence table

Appendix 3 – Qualitative appraisal of included MT studies

Appendix 4 – Qualitative appraisal of included DMT studies

Appendix 5 – group advertising leaflet

Appendix 6 – Participant information sheet

Appendix 7 – Consultee information sheet

Appendix 8 – Consultee declaration form

Appendix 9 – Participant consent form

Appendix 10 – Letter to GP

Appendix 11 – Cornell Scale for Depression in Dementia

Appendix 12 – Reflective tool

Appendix 13 – Initial study design involving control group

Appendix 14 – NHS ethical approval letter

Appendix 15 – Initial thematic map (to check with therapists)

Appendix 16 – Final thematic map (showing development of main themes)

Appendix One - Data Extraction Sheet

Source of study	
Authors [date]	
Country	
Design	
Aims, objectives and hypothesis [focus of the study]	
Individual/group	
Setting and context	
Sampling strategy and sampling size	
Participants	
Mean age	
Gender	
Type and level of dementia	
Interventions [experimental and control]	
Frequency	
Duration	
Time of day	
Theoretical perspective	
Clinical methodology	
Main outcome measures	
Other methods of data collection	
Number of drop outs	
Time of data collection	
Statistical analyses	
Results/findings	
Statistically significant?	
Risk of bias 6) Adequate sequence generation 7) Allocation concealment 8) Blinding 9) Intention to treat	

10) Incomplete outcome data 11) Free of selective reporting 12) Free of other bias	
Grade rating	
NICE level of evidence	

Appendix 2 – Level of evidence table

Level	Type of evidence	Grade	Evidence
I	Evidence obtained from a single randomised controlled trial or a meta-analysis of randomised controlled trials	A	At least one randomised controlled trial as part of a body of literature of overall good quality and consistency addressing the specific recommendation (evidence level I) without extrapolation
IIa	Evidence obtained from at least one well-designed controlled study without randomisation	B	Well-conducted clinical studies but no randomised clinical trials on the topic of recommendation (evidence levels II or III); or extrapolated from level I evidence
IIb	Evidence obtained from at least one other well-designed quasi-experimental study		
III	Evidence obtained from well-designed non-experimental descriptive studies, such		

	as comparative studies, correlation studies and case studies		
IV	Evidence obtained from expert committee reports or opinions and/or clinical experiences of respected authorities	C	Expert committee reports or opinions and/or clinical experiences of respected authorities (evidence level IV) or extrapolated from level I or II evidence. This grading indicates that directly applicable clinical studies of good quality are absent or not readily available
		GPP	Recommended good practice based on the clinical experience of the GDG.

Adapted from Eccles M, Mason J (2001) How to develop cost-conscious guidelines. *Health Technology Assessment* 5:16 and Mann T (1996) *Clinical Guidelines: Using Clinical Guidelines to Improve Patient Care Within the NHS*. London: Department of Health.

Appendix 3 - Grading for 'trustworthiness' for qualitative MT studies

Quality appraisal rating based on Cooke et al (2010)	Ahonen-Eerikainen et al (2007)	Kydd (2001)	Ridder & Aldridge (2005)	Tuckett et al (2015)
Credibility	Triangulation of methods was employed: The video-tapes, field notes of the RMT and the feeling wheel were all analysed separately. Data coded into themes for content analysis according to adapted grounded theory technique. However, members lacked any self-rating report scales, which could have added to the overall trustworthiness and credibility.	Limited exposition of methods and analysis. Argues that MT helped resident to acquire social skills and improve quality of life. However, data collection based on limited observations appears anecdotal	Case study exploring complex condition (frontotemporal dementia). Multiple sources of data (triangulation) used to confirm data including physiological and microanalysis	Researchers were independent of the treatment and experienced interviewers. Focus groups and suited to the study of attitudes and experiences. However, study concerned with evaluating effectiveness and self-reports/member checking would have added to the credibility. Some credibility was established through peer debriefing and the support from previous relevant research.

Transferability	The central phenomenon being explored was the therapeutic factors of the MT group. The participants are all day care attendees at St Joseph's centre; research is just one part of a wider project concerning whole centre.	The case study is well described and clear context provided including background, environment for sessions and social history of participant.	Story of life provided; detailed description of condition, symptoms and purpose of intervention	The central phenomenon being explored is effectiveness of MT within residential care setting. Direct quotes were reported from care staff and family but the participants voice not included.
Dependability	Some description of setting and procedure provided. Direct quotes used and it is clear how researcher's came to their categorisation.	The assessment and treatment procedure are described although more description about intervention would be helpful	Experienced practitioner, emphasis on the constitutional, the regulative and the dialogical and integrative presented clearly throughout	Interview Group data with majority being personal care assistants. Figures given in text. Setting and procedure described
Confirmability	Only data from group observations informed the results (one part of a wider interdisciplinary study)	Difficult to confirm as there is lack of clarity about how data was collected. Findings	Significant physiologic change reported but a single case does not 'prove'	Interviews were tape recorded and transcribed. Inter-coder reliability was made at level of coding and

	Unclear if the 'feeling wheel' is a valid tool	mainly come from staff observations of client changes "staff commented about how MT had helped" but not clear in what ways	connection between music therapy course and these changes	pattern identification. 76% agreement reached between the two researchers
A = No, or few flaws - D= Significant flaws	B/C	C/D	A/B	B

Appendix 4 - Grading for 'trustworthiness' of qualitative DMT studies

Quality Rating (Cooke et al 2010)	Coaten (2009)	Hill (2006)	Kowarzik (2006)	Nystrom (2005)	Wilkinson (1998)
Credibility	Experienced practitioner exploring difficult area of practice (late stage dementia) relevant to public concern. The study establishes credibility through triangulation of data sources including DCM, the VTR transcript, staff interviews (fair dealing and involving different perspectives)	Experienced practitioner attempting to focus on what is meaningful for the person with dementia. This increases the credibility and relevance of the research (member checking).	Independent researcher evaluating experienced practitioner. Video allowed cross referencing between the researcher's observations made during the sessions and those of the movement analyst independently	Practitioner/researcher using theoretical framework and own subjectivity to explore ambiguity of communication in dementia. Video analysis looked at sequences of interaction which were discussed between the two authors until agreement was reached.	Descriptive field notes provided regarding qualitative experiences in a drama and movement group. Participant quotations and behaviours described.

	combined with researcher's own analysis of meaning.		viewing the video material (peer debriefing). No attempt made to interview clients about their experiences as part of the evaluation.		
Transferability	Rich descriptions (33 themes identified from one-hour session). The study was part of a 6-week staff training program so staff ratio was high and untypical of normal DMT session. The context of the research on the ward is described and	The verbal and non-verbal responses of Elsie to what she saw was the central phenomenon being explored. Limited description of movement material and Laban movement analysis. A RMT also involved but their role not	Detail is provided about background and reason for the research and observations made. Methodology is provided plus detailed descriptions of client responses.	Research problem (ambiguity of non-verbal communication) explained. Dance therapy context described and examples of transcripts provided.	Information provided at an individual and a group level. Additional description provided about benefits to everyday living

	examples of raw data (video transcripts and wellbeing scores) are provided.	clearly expanded upon.			outside of the group.
Dependability	Embodied behaviours were identified and logged through a process of repeated viewing and re-viewing of video, which was gradually transformed into a written manuscript provided in the appendix. The dementia care scores of wellbeing are provided.	Lack of detail regarding methods. A brief case study is presented linked to more theoretical chapter around how DMP aligns with person centred care.	The LMC programme was delivered in several public residential care homes across London. The observational tool used was designed for the purpose of research and has not been tested in the wider clinical environment.	The theoretical basis and approach are described justifying the interpretations made (references to Chace, Winnicott and Merleau Ponty).	Lacks reflexivity. Not clear who is making observations (researcher? Observer? Therapist?)

Confirmability	Field work is part of researcher's PhD thesis. The VTR enabled researcher to increase understanding between what he had seen, noticed and remembered of the session. The researcher draws on his own heightened sense of subjectivity to deepen understanding of late stage dementia experience.	Therapist/researcher selected video footage but limited description of identified significant moments and use of Laban movement analysis.	Two of the clients did not participate in the last session. More in depth research would be needed to validate the assessment tool used. Movement analyst's observations not provided.	Video-film offers specific advantages, however, when transcribed to text information can be lost.	This was a controlled study and descriptions collected from experimental group only.
A = No, or few flaws. D = Significant flaws	A/B	B	C	B	C/D

Appendix 5 – Advertising leaflet

Research participants needed for an arts therapies group!

The group will include:

- Older adults (65+) with a diagnosis of any type of dementia
- Creative dance/movement and music making facilitated by registered arts therapists

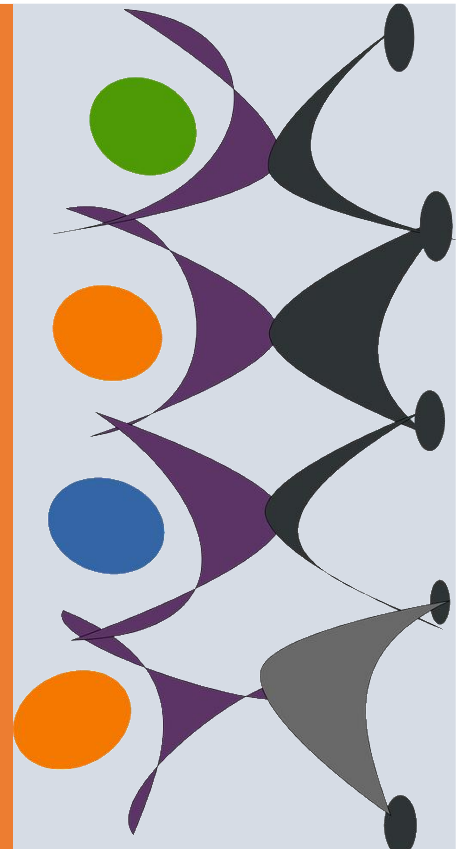
The research will involve:

- 5 group sessions (1 hour each)
- 3 brief questionnaires

If you are interested in taking part or would like more information please contact Steven Lyons at

Email: Lyonsst@edgehill.ac.uk

Tel: 07761011461



Appendix 6 – Participant information sheet

Participant Information Sheet

My name is Steven Lyons. I am a PhD candidate at Edge Hill University researching the value of arts therapies. To help with my study I am also working with Home Instead.



As part of my research, I would like to invite you to take part in a music and dance/movement therapy group. I am interested to know whether the group can benefit mood and/or communication.

If you would like to take part in the group, you will be asked to complete some questions. This will be to help assess your mood.

You will also be asked for your consent for the sessions to be video recorded. This is to help

look in more detail at the process of communication.

After the study has finished I will write about the results in my PhD thesis. These results will not use anyone's name that has taken part in the research. I may also like to share data collected in future publications and conferences. But this is only with your consent and all data (including video) can be anonymised.

If you have any questions, please talk to your relative or a member of the Home Instead team about the project.

Please remember

It is entirely your decision to take part. Also, if you start and decide that you want to stop, you are free to do so.

Whatever you decide, this will not affect the help you get here or anywhere else.

Thank you very much!

Appendix 7 - Consultee information sheet

Edge Hill University

Title of project: Exploring the value of a dance, movement and music psychotherapy group for older adults with dementia living in the community

Consultee information sheet

I am looking to recruit participants with dementia who are over 65 years and living in the community to take part in a research study.

The care team involved feel your relative/friend is unable to decide for himself/herself whether to participate in this research.

To help decide if he/she should join the study, I'd like to ask your opinion whether or not they would want to be involved. I'd ask you to consider what you know of their wishes and feelings, and to consider their interests.

If you decide your relative/friend would have no objection to taking part, please read and sign the consultee declaration form. I will then give you a copy to keep. I will keep you fully informed during the study so you can let myself (or anyone in the team) know if you have any concerns or you think your relative/friend should be withdrawn.

If you decide that your friend/relative would not wish to take part it will not affect the standard of care they receive in any way.

If you are unsure about taking the role of consultee you may seek independent advice.

I will understand if you do not want to take on this responsibility.

The following information provides details about the study.

Who is doing the research?

My name is Steven Lyons and I am a PhD candidate at Edge Hill University. My research is investigating the value of the arts therapies for older people with dementia. Home Instead are a local care organisation working with people in the community. They have agreed to help with my study. If there is anything that is unclear or you would like more information, my contact details are:

Researcher: Steven Lyons, PhD Candidate

Address: Edge Hill University

St Helens Road

Ormskirk

L394QP

Email: Lyonsst@edgehill.ac.uk

Tel: 07761011461

This research is supervised by:

Director of studies: Professor V. Karkou

Address: Edge Hill University

St Helens Road

Ormskirk

L394QP

Email: karkouv@edgehill.ac.uk

The research team also includes Dr Bonnie Meekums (University of Leeds) Dr Michael Richards (Edge Hill University) and Professor Stephen Davismoon (Edge Hill University).

What is the Purpose of the study?

There is research evidence that music therapy can help temporarily alleviate symptoms of dementia such as depression and agitation. Also, findings from dance movement psychotherapy suggest that non-verbal activity can help promote good communication and wellbeing. This is the second stage of my PhD and will investigate the value of a combined music and dance movement psychotherapy group for people with dementia living in the community. To do this your relative/friend will be asked to answer some questions about their mood and consent to sessions being video recorded to look closer at the therapeutic process.

Why have I been invited to take part?

You have been invited to take part because you are a relative of someone over 65-years old who has a diagnosis of dementia and is living at home. Although you will not be directly involved in the sessions, your involvement will be sought to decide whether the research may be of value to your relative/friend.

What will happen to me if I take part?

If you decide to take part, you and your relative/friend will be invited to attend an initial interview at a location convenient to you. In this meeting I will explain what you would have to do, provide an information sheet for you to keep, and answer any questions you might have. Your relative will also be asked to sign a consent form and answer some basic questions. I will also ask for permission to notify your relative's GP that they are taking part in the study.

Following this meeting, your relative will be put randomly into one of two groups. Neither you, your GP nor any of the research team can choose which group you will be in. This is to make sure both groups are the same to start with, so that the therapy can be accurately assessed.

What will I have to do?

Your relative/friend will be offered a place in an arts therapy group involving dance/movement and live music. Each group will consist of between 5-10 participants and be facilitated by two professionally registered arts therapists and a member of staff from Home Instead. Although your presence in the sessions will not be required in the sessions you are invited to wait at the on-site café.

The study will be conducted over 11 weeks. During this time, you and your relative/friend will be asked to complete three short interviews about their mood. For 5 weeks your relative will attend a music and dance movement psychotherapy group. I would like to compare scores over the 11-week period between the two groups.

I would like to disseminate my findings in future publications and conferences. However, this would only be with your consent and your friend/relative's identity can always remain anonymous. You will be asked whether you consent for video to be used for the purposes of dissemination but this is not a requirement to taking part in the study.

Expenses and Payment

You or your relative/friend will not be paid for taking part in this study.

What are the risks in taking part in this study?

As with all interventions there may be adverse effects, for example, increased agitation. But this is unlikely to be more than that occurring in normal social interaction.

What are the benefits of taking part?

Research evidence suggests a short term reduction in unwanted symptoms of dementia such as anxiety and depression as well as increased self-awareness, empowerment, and social and emotional wellbeing.

What happens to me when the research has finished?

Your active involvement in the study will continue for 11 weeks. I will not be able to contact individual participants to share the outcome of the study with them, as personal details will not be kept. However, you are invited to follow-up with the researcher (by for example, leaving an email address) to obtain a summary sheet of the key findings emerging from the study if you wish.

What if there are any problems?

Any complaint about the way you have been dealt with during the research or any possible harm you might suffer will be addressed. If you have any queries about this study, please contact the researcher (Steven Lyons) or else a member of the Home Instead Team.

Alternatively, if you would prefer to talk to someone outside the research team you can contact: Dr Nikki Craske, Director of Research Office, Edge Hill University, Ormskirk, Lancs, L394QP, Tel. 01695 650925
crasken@edgehill.ac.uk

Will my relative's participation and personal records be kept confidential?

If you join the study, the data collected for the study will be looked at by authorised persons from Edge Hill University. All will have a duty of confidentiality to your relative as a research participant and we will do our best to meet this duty. All data will be kept securely according to the Data Protection Act. The data collected will be made anonymous at the earliest opportunity and kept securely in restricted access location within Edge Hill University.

Who has reviewed the study?

This study has been reviewed and given favourable opinion by the Research Ethics Committee at Edge Hill University and an NHS Research Ethics Committee.

Further information and contact details

If you would like further information, you contact the researcher on the details provided above. For independent advice, contact INVOLVE which is a government funded advisory group to support people taking part in research: <http://www.invo.org.uk> Further support around living with dementia can be found: <https://www.alzheimers.org.uk>

Yours sincerely,

Steven Lyons (MA, MSc, HCPC registered music therapist)

Appendix 8 – Consultee declaration form

Edge Hill University

CONSULTEE DECLARATION FORM

Title of Project: Exploring the value of combined music and dance movement psychotherapy group for older adults with dementia living in the community

Name of Researcher: Steven Lyons

Please initial box

I [name of consultee] have been consulted about [name of potential participant]'s

☐

participation in this research project. I have had the opportunity to ask questions

about the study and understand what is involved.

In my opinion he/she would have no objection to taking part in the above study.

☐

I understand that I can request he/she is withdrawn from the study at any time, without giving any reason and without his/her care or legal rights being affected.

☐

I understand that data collected (including video) during the study may be looked at by

☐

individuals from Edge Hill University. I understand that all data collected will be treated as confidential.

I agree to [name of potential participant's] anonymised data being used in the dissemination of results.

☐

I agree to [name of potential participant's] video data being used in the dissemination of results.

☐

I agree to their GP or other care professional being informed of their participation in the study.

☐

Name of Consultee

Date

Signature

Relationship to participant:

Researcher

Date

Signature

When completed: 1 for consultee; 1 for researcher site file

Appendix 9 - Participant consent form

Edge Hill University

CONSENT FORM

Title of research: Exploring the value of a dance/movement and music psychotherapy group for older adults with dementia living in the community

Name of researcher: Steven Lyons

Please consider the following statements and answer 'Yes' or 'No' by marking the appropriate box.

YES

NO

I confirm that I have read and understand the participant information sheet for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.

☐☐

I understand that my participation is voluntary and that I am free to withdraw at any time without giving reason.

☐☐

I understand that data collected (including video) during the study, may be looked at by individuals from Edge Hill University research team. I understand that all data collected will be treated as confidential.

☐☐

I agree to my anonymised data being used in the dissemination of results.

☐☐

I agree to my video footage being used in the dissemination of results.

☐☐

I agree to my GP being informed of my participation in the study.

☐☐

I agree to take part in the above study.

Name of participant:

Date:

Signature:

Researcher:

Date:

Signature:

When completed: 1 for participant; 1 for researcher site file

Appendix 10 - Letter to GP

Steven Lyons

PhD Candidate

Edge Hill University

Department of Performing Arts

St Helen's Road

Ormskirk

L394QP

Dr (Doctor's name)

Address of GP Surgery

Dear Dr (Doctor's name)

Re: (Patient's name)

I am a PhD candidate, currently undertaking research into arts psychotherapies at Edge Hill University. My PhD project is investigating the value of dance, movement and music psychotherapy group for older adults with dementia living in the local community. Home Instead (West Lancashire and Chorley branch) are helping to facilitate this project by identifying potential participants.

Your patient, (Patient's name), agreed to take part in the study and will receive five group sessions to be provided between June – July 2017. In addition to the group sessions, (Patient's name) participation in this study will involve the completion of the Cornell Scale for Depression in Dementia on two to three occasions.

If you would like any further information about this project, please contact me using the details above.

Yours sincerely,

Steven Lyons

Appendix 11 - Quantitative outcome measure used in the study

Cornell Scale for Depression in Dementia

The scale is designed as a screening tool and is not diagnostic

2 steps:

1. The clinician interviews the resident's caregiver on each of the 19 items of the scale. The caregiver is instructed to base his / her report on observations of the resident's behaviour during the week prior to the interview
2. The clinician briefly interviews the resident

Total time of administration = approximately 30 minutes

For use with moderate to severely impaired elders with dementia

The scale is valuable to demonstrate effectiveness of interventions, especially antidepressant treatment, when it is completed before the intervention and several weeks after.

Scoring:

1. Each question is scored on a two-point scale: 0 = absent; 1 = mild or intermittent; 2 = severe; n / a = unable to evaluate
2. The caregiver is asked to describe the resident's behaviour observed during the week prior to the interview. Two items, "loss of interest" and "lack of energy" require both a disturbance occurring during the week prior to the interview and relatively acute changes in these areas occurring over less than one month. In these 2 items, the caregiver is instructed to report on the resident's behaviour during the week prior to interview, then give the history of the onset of changes in these 2 areas that may have taken place at an earlier item.
3. The item "suicide" is rated with a score of "1" if the resident has passive suicidal ideation, e.g. feels life is not worth living. A score of "2" is given to subjects who have active suicidal wishes, or have made a recent suicide attempt. History of a suicide attempt in a subject with no passive or active suicidal ideation does not in itself justify a score.
4. If there is a disagreement between the clinician's impression and the caregiver's report, the caregiver is interviewed again in order to clarify the source of discrepancy.
5. Older persons often have disabilities or medical illnesses with symptoms and signs similar to those of depression. Scoring of the Cornell scale on items as "multiple physical complaints", "appetite loss", "weight loss", "lack of energy", and possibly others may be confounded by disability or physical disorder.

To minimize assignment of falsely high Cornell scale scores in disabled or medically ill residents, raters are instructed to assign a score of "0" for symptoms and signs associated with these conditions. In many cases, the relationship between symptomatology and physical disability or illness is obvious. In some residents, this determination cannot be made reliably.

Screening Tool: Cornell Scale for Depression in Dementia (CSDD)

Scoring System: a = unable to evaluate
0 = absent
1 = mild or intermittent
2 = severe

Ratings should be based on symptoms and signs occurring during the week prior to interview.
No score should be given if symptoms result from physical disability or illness.

A. Mood-Related Signs

1. Anxiety anxious expression, ruminations, worrying	a	0	1	2
2. Sadness sad expression, sad voice, tearfulness	a	0	1	2
3. Lack of reactivity to pleasant events	a	0	1	2
4. Irritability easily annoyed, short-tempered	a	0	1	2

B. Behavioral Disturbance

1. Agitation restlessness, handwringing, hairpulling	a	0	1	2
2. Retardation slow movements, slow speech, slow reactions	a	0	1	2
3. Multiple physical complaints (score 0 if GI symptoms only)	a	0	1	2
4. Loss of interest less involved in usual activities (score only if change occurred acutely, i.e., in less than 1 month)	a	0	1	2

C. Physical Signs

1. Appetite loss eating less than usual	a	0	1	2
2. Weight loss score 2 if greater than 5 lb. in one month	a	0	1	2
3. Lack of energy fatigues easily, unable to sustain activities (score only if change occurred acutely, i.e., in less than 1 month)	a	0	1	2

continued on reverse →

D. Cyclic Functions

1. Diurnal variation of mood symptoms worse in the morning	a	0	1	2
2. Difficulty falling asleep later than usual for this individual	a	0	1	2
3. Multiple awakenings during sleep	a	0	1	2
4. Early-morning awakening earlier than usual for this individual	a	0	1	2

E. Ideational Disturbance

1. Suicide feels life is not worth living, has suicidal wishes or makes suicide attempt	a	0	1	2
2. Poor self-esteem self-blame, self-deprecation, feelings of failure	a	0	1	2
3. Pessimism anticipation of the worst	a	0	1	2
4. Mood-congruent delusions delusions of poverty, illness or loss	a	0	1	2

Scoring:

A score >10 probably major depressive episode
A score >18 definite major depressive episode

How to obtain permission to use the Cornell Scale for Depression in Dementia:

George Alexopoulos, M.D.
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OR

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Appendix 12 – Reflective tool

Name:

Profession:

1. Have you seen changes in the participants' creative expression in the session today?

Yes/No

Examples:

Changes at a group level -

Changes at an individual level -

2. Can you describe in words moments in the session that you felt were significant in terms of the participants' creative expression?

Examples:

At a group level –

At an individual level –

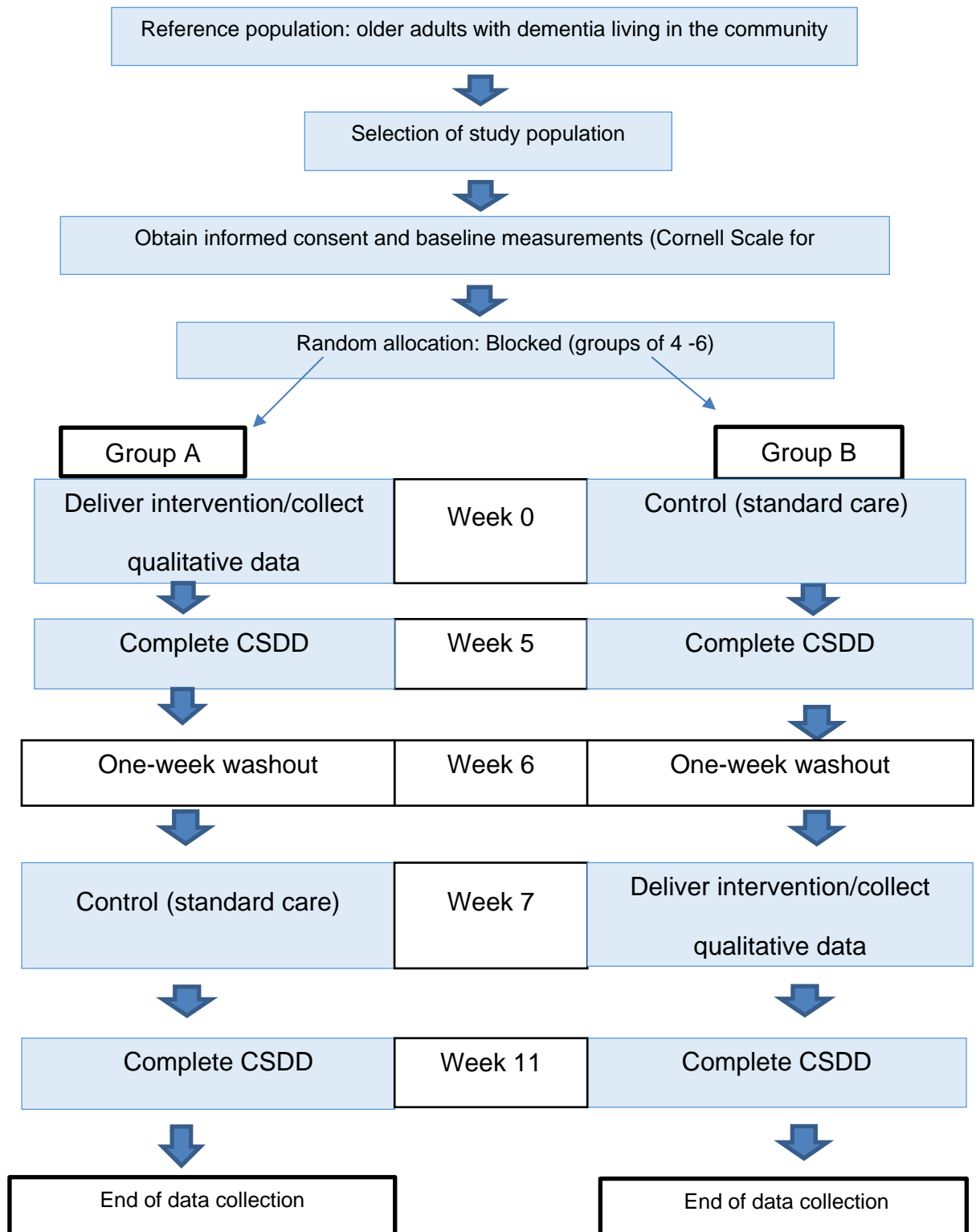
3. Can you capture on video what these moments looked like using movement/music?

Examples:

(Encourage dance movement therapist show gesture, posture, movement or similar with or without props; music therapist to use sound, voice, make music with or without instruments)

Thank you for your reflections!

Appendix 13 - initial study design involving control group



Appendix 14 – NHS ethical approval letter



Health Research Authority

London - Bromley Research Ethics Committee

Level 3, Block B
Whitefriars
Lewins Mead
Bristol
BS1 2NT

Please note: This is the favourable opinion of the REC only and does not allow you to start your study at NHS sites in England until you receive HRA Approval

02 May 2017

Mr Steven Lyons
Edge Hill University
St Helen's Road
Ormskirk
L394QP

Dear Mr Lyons

Study title:	A mixed methods feasibility study exploring the value of a combined music therapy and dance movement psychotherapy group for older adults with dementia living in the community.
REC reference:	17/LO/0663
Protocol number:	Version 1
IRAS project ID:	215811

The Research Ethics Committee reviewed the above application at the meeting held on 20 April 2017. Thank you for attending to discuss the application.

We plan to publish your research summary wording for the above study on the HRA website, together with your contact details. Publication will be no earlier than three months from the date of this favourable opinion letter. The expectation is that this information will be published for all studies that receive an ethical opinion but should you wish to provide a substitute contact point, wish to make a request to defer, or require further information, please contact hra.studyregistration@nhs.net outlining the reasons for your request. Under very limited circumstances (e.g. for student research which has received an unfavourable opinion), it may be possible to grant an exemption to the publication of the study.

Ethical opinion

Health Research Authority

The members of the Committee present gave a favourable ethical opinion of the above research on the basis described in the application form, protocol and supporting documentation, subject to the conditions specified below. .

Mental Capacity Act 2005

I confirm that the Committee has approved this research project for the purposes of the Mental Capacity Act 2005. The Committee is satisfied that the requirements of section 31 of the Act will be met in relation to research carried out as part of this project on, or in relation to, a person who lacks capacity to consent to taking part in the project.

Conditions of the favourable opinion

The REC favourable opinion is subject to the following conditions being met prior to the start of the study.

1. Amend the Consultee Information Sheet reference from “embodied practice” to “non-verbal activity”.
2. Add “Yes/No” boxes for the Consent Form and Consultee Declaration Form
3. **Recommendation:** To investigate the feasibility of offering a social group for the control group.

You should notify the REC once all conditions have been met (except for site approvals from host organisations) and provide copies of any revised documentation with updated version numbers. Revised documents should be submitted to the REC electronically from IRAS. The REC will acknowledge receipt and provide a final list of the approved documentation for the study, which you can make available to host organisations to facilitate their permission for the study. Failure to provide the final versions to the REC may cause delay in obtaining permissions.

Management permission must be obtained from each host organisation prior to the start of the study at the site concerned.

Management permission should be sought from all NHS organisations involved in the study in accordance with NHS research governance arrangements. Each NHS organisation must confirm through the signing of agreements and/or other documents that it has given permission for the research to proceed (except where explicitly specified otherwise).

Guidance on applying for HRA Approval (England)/ NHS permission for research is available in the Integrated Research Application System, at www.hra.nhs.uk or at <http://www.rdforum.nhs.uk>.

Where a NHS organisation’s role in the study is limited to identifying and referring potential participants to research sites (“participant identification centre”), guidance should be sought from the R&D office on the information it requires to give permission for this activity.

For non-NHS sites, site management permission should be obtained in accordance with the procedures of the relevant host organisation.

Sponsors are not required to notify the Committee of management permissions from host organisations.

Registration of Clinical Trials

All clinical trials (defined as the first four categories on the IRAS filter page) must be registered on a publically accessible database. This should be before the first participant is recruited but no later than 6 weeks after recruitment of the first participant.

There is no requirement to separately notify the REC but you should do so at the earliest opportunity e.g. when submitting an amendment. We will audit the registration details as part of the annual progress reporting process.

To ensure transparency in research, we strongly recommend that all research is registered but for non-clinical trials this is not currently mandatory.

If a sponsor wishes to request a deferral for study registration within the required timeframe, they should contact hra.studyregistration@nhs.net. The expectation is that all clinical trials will be registered, however, in exceptional circumstances non registration may be permissible with prior agreement from the HRA. Guidance on where to register is provided on the HRA website.

It is the responsibility of the sponsor to ensure that all the conditions are complied with before the start of the study or its initiation at a particular site (as applicable).

Ethical review of research sites

NHS Sites

The favourable opinion applies to all NHS sites taking part in the study taking part in the study, subject to management permission being obtained from the NHS/HSC R&D office prior to the start of the study (see "Conditions of the favourable opinion" below).

Non NHS sites

The Committee has not yet completed any site-specific assessment(s) (SSA) for the non-NHS research site(s) taking part in this study. The favourable opinion does not therefore apply to any non-NHS site at present. I will write to you again as soon as an SSA application(s) has been reviewed. In the meantime no study procedures should be initiated at non-NHS sites.

Summary of discussion at the meeting

- **Social or scientific value; scientific design and conduct of the study**

Relevance of the research to the impairing condition

The Committee agreed the research is connected with an impairing condition affecting persons lacking capacity or with the treatment of the condition.

Justification for including adults lacking capacity to meet the research objectives

The Committee agreed the research could not be carried out as effectively if it was confined to participants able to give consent.

Health Research Authority

The Committee queried how the extraneous variables would be controlled to ensure that the music and dance were the only manipulated variable. It asked what the standard care for all participants would be.

You replied that you would be working with a service provider who would continue to meet all participants in their homes with one group having the intervention on top of these home visits.

The Committee asked whether the control group would need to also meet as a group but without the music and dance so that it does not act as a confounding variable.

You replied that you appreciated it was a limitation of the study not having this group. You explained that initially it was a parallel group but due to resources it was a between subjects design.

The Committee stated that the study would be improved by offering the control group a social support.

The Committee queried what the process would be should the participant become distressed.

You replied that the facilitators included a music therapist who had experience in working with a variety of people. You stated that you appreciated that music could influence mood but it would be well managed between the experienced therapists within the team.

The Committee was content with the response given.

The Committee commented that the Consultee Information Sheet under “What is the purpose of the study” the term “embodied practice” should be rephrased in lay language.

You agreed to revise this phrase to “non-verbal activity”.

The Committee was content with the response given.

- **Favourable risk benefit ratio; anticipated benefit/risks for research participants (present and future)**

Balance between benefit and risk, burden and intrusion

After discussion, the Committee agreed that the research has the potential to benefit participants lacking capacity without imposing a disproportionate burden on them.

The Committee decided that the research did not require Site-Specific Assessment at non-NHS sites as it involves no clinical interventions and all study procedures at sites would be undertaken by the Chief Investigator’s team and the Committee was satisfied that the risk to participants is likely to be negligible, and the study procedures will not significantly interfere with participants’ freedom of action or privacy or be unduly invasive or restrictive.

- **Informed consent process and the adequacy and completeness of participant information**

Information for consultees

The Committee reviewed the information to be provided to consultees about the proposed research and their role and responsibilities as a consultee.

The Committee was satisfied that the information was adequate to enable consultees to give informed advice about the participation of persons lacking capacity.

The Committee stated the statements in the Consultee Declaration Forms and Participant Consent Forms should be given “Yes” and “No” options. The Committee noted that the option for patients to have their faces pixelated was not given in the Consent Form.

You agreed to make the changes requested.

The Committee commended the recognition of recruiting participants with special educational needs stated in [A33] of the IRAS form.

Other ethical issues were raised and resolved in preliminary discussion before your attendance at the meeting.

Please contact the REC Manager if you feel that the above summary is not an accurate reflection of the discussion at the meeting.

Approved documents

The documents reviewed and approved at the meeting were:

Document	Version	Date
Contract/Study Agreement [Code of Practice]	Version 1	06 April 2017
Copies of advertisement materials for research participants [Flyer]	Version 1	14 March 2017
Covering letter on headed paper [Covering letter]	Version 1	21 March 2017
Evidence of Sponsor insurance or indemnity (non NHS Sponsors only) [Letter for indemnity]		25 August 2016
GP/consultant information sheets or letters [Letter for GP]	Version 1	30 January 2017
GP/consultant information sheets or letters [Consultee Information Sheet]	Version 1	15 March 2017
Interview schedules or topic guides for participants [Reflective tool]	Version 1	21 March 2017
IRAS Application Form [IRAS_Form_10042017]		10 April 2017
IRAS Checklist XML [Checklist_07042017]		07 April 2017
IRAS Checklist XML [Checklist_10042017]		10 April 2017
IRAS Checklist XML [Checklist_10042017]		10 April 2017
Participant consent form [Participant Consent Form]	Version 2	12 March 2017
Participant consent form [Consultee Declaration Form]	Version 1	15 March 2017
Participant information sheet (PIS) [Participant Info Sheet]	Version 1	30 January 2017
Research protocol or project proposal [Protocol]	Version 1	21 March 2017
Summary CV for Chief Investigator (CI) [Summary CV]	Version 1	14 March 2017
Summary CV for supervisor (student research) [Supervisor CV]		21 March 2017
Summary, synopsis or diagram (flowchart) of protocol in non technical language [Summary of protocol]	Version 1	21 March 2017

Membership of the Committee

The members of the Ethics Committee who were present at the meeting are listed on the attached sheet.

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

After ethical review

Reporting requirements

The attached document “After ethical review – guidance for researchers” gives detailed guidance on reporting requirements for studies with a favourable opinion, including:

- Notifying substantial amendments
- Adding new sites and investigators
- Notification of serious breaches of the protocol
- Progress and safety reports
- Notifying the end of the study

The HRA website also provides guidance on these topics, which is updated in the light of changes in reporting requirements or procedures.

User Feedback

The Health Research Authority is continually striving to provide a high quality service to all applicants and sponsors. You are invited to give your view of the service you have received and the application procedure. If you wish to make your views known please use the feedback form available on the HRA website: <http://www.hra.nhs.uk/about-the-hra/governance/quality-assurance/>

HRA Training

We are pleased to welcome researchers and R&D staff at our training days – see details at <http://www.hra.nhs.uk/hra-training/>

17/LO/0663

Please quote this number on all correspondence
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With the Committee's best wishes for the success of this project.

Yours sincerely



Ms Jayne Steadman
Chair

E-mail: nrescommittee.london-bromley@nhs.net

Enclosures: List of names and professions of members who were present at the meeting and those who submitted written comments

"After ethical review – guidance for researchers"

Copy to: Professor Vicky Karkou

Health Research Authority

London - Bromley Research Ethics Committee

Attendance at Committee meeting on 20 April 2017

Committee Members:

<i>Name</i>	<i>Profession</i>	<i>Present</i>	<i>Notes</i>
Mr Munir Ahmed	Consultant Urologist	Yes	
Mr Colin Allies	General Manager (Retired)	Yes	
Dr Anna Barnes	Associate Director; Programme Office and Governance	No	
Dr Jo Brooke	Associate Professor in Dementia Care	No	
Mrs Angela Clayton-Turner	NHS Therapy Manager (Retired)	No	
Miss Amber Collingwood	Programme Manager, Epilepsy Research	No	
Mr Abdulzahra Hussain	Upper GI Consultant Surgeon	Yes	
Mrs Kathryn Kinnear	Solicitor	Yes	
Mrs Fran McMillan	Retired	Yes	
Canon Tim Mercer	Hospital Chaplain	Yes	
Dr Angela Orunta	Consultant Anaesthetist	Yes	
Mrs Heather Salzer	Ultrasound Clinical Specialist (Retired)	No	
Ms Helen Sivey	REC Manager	No	
Ms Jayne Steadman (Chair and Meeting Chair)	Consultant Physiotherapist	Yes	
Dr Jacqueline Tavabie	General Practitioner	Yes	



Health Research Authority

London - Bromley Research Ethics Committee

Level 3, Block B
Whitefriars
Lewins Mead
Bristol
BS1 2NT

Please note: This is an acknowledgement letter from the REC only and does not allow you to start your study at NHS sites in England until you receive HRA Approval

04 May 2017

Mr Steven Lyons
Edge Hill University
St Helen's Road
Ormskirk
L394QP

Dear Mr Lyons

Study title: A mixed methods feasibility study exploring the value of a combined music therapy and dance movement psychotherapy group for older adults with dementia living in the community.

REC reference: 17/LO/0663

Protocol number: Version 1

IRAS project ID: 215811

Thank you for your letter of 4th May 2017. I can confirm the REC has received the documents listed below and that these comply with the approval conditions detailed in our letter dated 02 May 2017.

Documents received

The documents received were as follows:

Document	Version	Date
GP/consultant information sheets or letters [Consultee Information Sheet]	Version 2	04 May 2017
Participant consent form [Participant Consent Form]	Version 3	04 May 2017
Participant consent form [Consultee Declaration Form]	Version 2	04 May 2017

Approved documents

The final list of approved documentation for the study is therefore as follows:

Document	Version	Date
Contract/Study Agreement [Code of Practice]	Version 1	06 April 2017
Copies of advertisement materials for research participants [Flyer]	Version 1	14 March 2017
Covering letter on headed paper [Covering letter]	Version 1	21 March 2017
Evidence of Sponsor insurance or indemnity (non NHS Sponsors only) [Letter for indemnity]		25 August 2016
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Interview schedules or topic guides for participants [Reflective tool]	Version 1	21 March 2017
IRAS Application Form [IRAS_Form_10042017]		10 April 2017
IRAS Checklist XML [Checklist_04052017]		04 May 2017
Participant consent form [Participant Consent Form]	Version 3	04 May 2017
Participant consent form [Consultee Declaration Form]	Version 2	04 May 2017
Participant information sheet (PIS) [Participant Info Sheet]	Version 1	30 January 2017
Research protocol or project proposal [Protocol]	Version 1	21 March 2017
Summary CV for Chief Investigator (CI) [Summary CV]	Version 1	14 March 2017
Summary CV for supervisor (student research) [Supervisor CV]		21 March 2017
Summary, synopsis or diagram (flowchart) of protocol in non technical language [Summary of protocol]	Version 1	21 March 2017
Validated questionnaire [Cornell Scale]	Version 1	

You should ensure that the sponsor has a copy of the final documentation for the study. It is the sponsor's responsibility to ensure that the documentation is made available to R&D offices at all participating sites.

17/LO/0663

Please quote this number on all correspondence

Yours sincerely

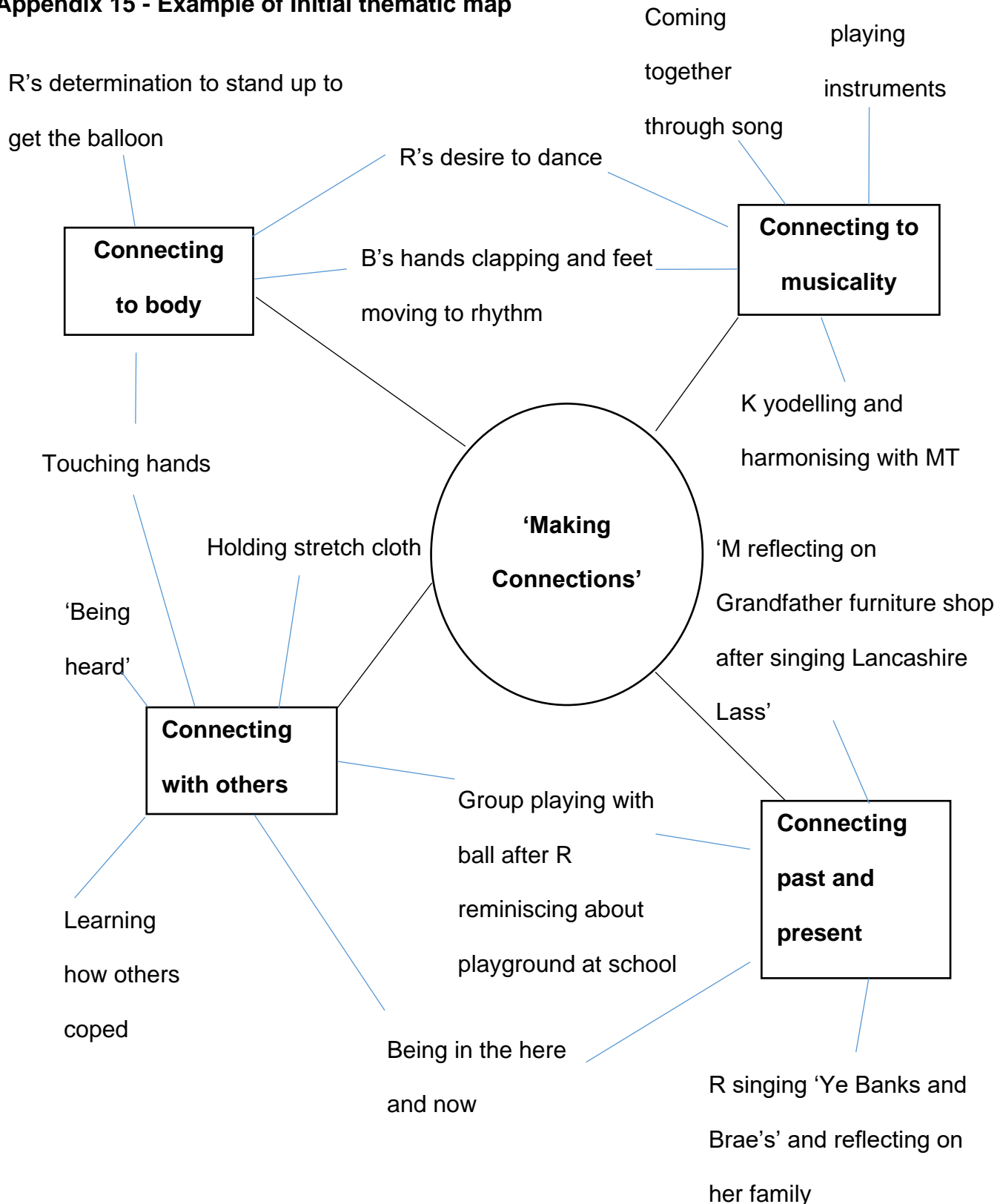


Amy Peters
REC Assistant

E-mail: nrescommittee.london-bromley@nhs.net

Copy to: Professor Vicky Karkou

Appendix 15 - Example of Initial thematic map



Appendix 16 - Final thematic map

Initial codes indicating perceived changes in participants use of music/movement	Subtheme linking to question of 'value'	Main Theme
1) K yodelling – MT harnessing his musicality through improvisation (Therapist reflective tool and video data)	Connecting with musicality	'Making connections'
2) <i>A 'drawing in' and coming together through song and group singing (Therapists reflective tool)</i>		
3) R singing solo and then increasingly supported by group humming along (Video data)		
4) <i>"The music was slow, then the tempo increased, the group started clapping and stamping and looked at each other. The change in the tempo served as a trigger for the group – they picked it up instantly" (Therapists reflective tool)</i>		
5) B's desire to get up and dance when music started (Researcher's journal)	Connecting to body	
6) B's hands were clapping and feet moving to rhythm (Therapists reflective tool and video data)		
7) Changes in facial expression 'lifting' as they realized name being sung (Video data)		

8) Free movement – ‘no restrictions’ (James said) - encouraged people to be more adventurous (Video data)	Connecting to others
9) <i>Exploring hands and touch – increased sensitivity/awareness (Therapists reflective tool)</i>	
10) <i>‘Everyone holding the stretch cloth and passing the balloon around’ (Therapists reflective tool)</i>	
11) Co-ordination of bodies and timing to hit balloon. (Video data)	Connecting past and present
12) The use of familiar songs from past to elicit engagement in present (Therapists reflective tool and researcher’s journal)	
13) R reminiscing about early school years when playing with ball (Therapists reflective tool and journal)	
14) <i>Frank appeared angry but his agitation eased throughout session (Therapists reflective tool)</i>	
15) Raymond expressing – ‘I can’t really do much’ (Therapists reflective tool and video data)	
16) Beverly trying to explain how frustrating it was not being able to speak (Therapists reflective tool and researcher’s journal)	Expressing anger and frustration
17) Instability and anxiety, particularly around R’s and K’s failing mobility (Video and researcher’s journal)	
‘Acknowledging grief and loss’	

-
- | | |
|---|--------------------------------------|
| <p>18) <i>Many examples of interaction between the group members – both in musical aspects and where discussion was taking place. Encouragement of different individuals as they spoke or sang by others. Sense of cohesive, supportive group of individuals who had grown into their openness and sharing – particularly evident in this second group, which began as less cohesive whole. Individuals were very aware of ending of group and it was mentioned frequently</i> (Therapists reflective tool)</p> | <p>Peer support</p> |
| <p>19) Raymond acknowledging – ‘it’s good learning how other people cope’ (Researcher’s journal and video data)</p> | |
| <p>20) Anxiety about the group ending and what would come next – using songs to contain anxiety for Mary (Therapists reflective tool)</p> | <p>Supporting difficult feelings</p> |
| <p>21) Beverly crying when she arrived late (Researcher’s journal)</p> | |
| <p>22) <i>Rita said it was sad that the group was ending and seemed worried about what she would do. That triggered a goodbye song as people agreed with her and started to sing</i> (Researcher’s journal)</p> | |
-

23) <i>Participants determination and increased assertiveness passing the balloon (demonstrated in video data and therapists reflective tool)</i>		
24) <i>'J was very energetic and creative with passing the balloon on the cloth. She was pulling it to herself, smiling, hitting it from the top' (Therapists reflective tool)</i>	Empowering experiences	
25) <i>Group engagement trying to balance balloon on stretch cloth – a sense of flow, activity providing just enough challenge (Video data)</i>		
26) <i>Frank adjusted his musical playing so he was not playing too loudly on the cymbal – showed increased awareness of others (Video data and researcher's journal)</i>		'Growth and Empowerment'
27) <i>Joyce throwing the ball over Frank to Steven – surprise and group recognizing Joyce's humour (Therapists reflective tool)</i>	Increased awareness of others	
28) <i>MT creating musical suspense waiting for Joyce to pass the ball (Video data)</i>		
29) <i>Playful whistling between group members – a growth in relationships (Video data and researcher's journal)</i>		
30) <i>Playing football and pretending to score (Therapists reflective tool)</i>		
31) <i>Imagination - 'That's clever!' – R using stick to get ball (Therapists reflective tool)</i>	Shared play	
32) <i>Frank began to play the jingle bells rhythm and everyone joined in (Video data)</i>		

33) *'At one point, Rita and Frank were playing instruments – real sense of playfulness and creative free expression between them as Rita leaned over to play cymbal in front of Frank and Joyce. Echoed in many instances during the session, perhaps hard to imagine outside of a musical experience'* (Therapists reflective tool and researcher's journal)
